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Problems of Economics

ВОПРОСЫ ЭКОНОМИКИ

English Translation of the U.S.S.R. Monthly Journal VOPROSY EKONOMIKI

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The Great Program of Communist Construction.

The Decisive Stage in the Economic Competition Between Socialism and Capitalism

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Training Economic Cadres for Industrial Enterprises

An Important Condition for Fulfillment of the Plan for Capital Construction

Problems of the Structure of Industrial Production in the USSR

Significance of Pipeline Transportation Development to the National Economy

Indivisible Funds of the Collective Farms, and Cooperation Among Collective Farms in Matters of Production

The Transition to a Guaranteed Payment for Labor on the Collective Farms

Ways to Rationalize the Utilization of our Timber Resources

Several Methodological Problems in Standard of Living Computations

On Increasing the Role of Public Food Service in Raising the Standard of Living of the Workers

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THE GREAT PROGRAM OF COMMUNIST CONSTRUCTION

The November Plenum of the Central Committee of the CPSU has approved the draft theses of the report to be delivered by Comrade N. S. Khrushchev at the 21st Congress of the CPSU, Control Figures for the Development of the USSR National Economy in 1959-1965, and has resolved to conduct a wide pre-convention discussion of these theses throughout the country. The Plenum also approved the draft theses of the CC CPSU and the USSR Council of Ministers, Strengthening the Ties of the Schools With Life, and Further Development of the System of Public Education.

The December Plenum of the CC CPSU, which heard and discussed Comrade N. S. Khrushchev's report, Results of the Development of Agriculture in the Past Five Years, and the Objectives of Further Increase in Production of Agricultural Produce, was a noteworthy event in Soviet life. The historical significance of the Plenum lies in the fact that its work was a political report by the Communist Party to the people on the state of agriculture. As the result of the carrying into life of the vast undertakings elaborated by the Plenum of the CC CPSU of September, 1953, and subsequent plenums, and also by the 20th Party Congress, socialist agriculture has made a gigantic leap forward in its development in a brief period. The successful fulfillment of the program for increasing the production of agricultural products was a major contribution to the further economic development of the Soviet state, the reinforcement of its power and the elevation of the living standards of Soviet people.

The Soviet land is greeting the 21st Party Congress with stupendous triumphs in the development of industry and agriculture, science, engineering, culture and art, and an unbroken rise in the material standard of life of the working people. These achievements provide a bright reflection of the great vital force of the socialist system.

Soviet society has shown itself capable of solving, in the briefest periods of time, historical problems so grandiose as to have been beyond the powers of any prior social and economic system. Even prior to the victory of the Great October socialist revolution, Vladimir Ilyich Lenin stated with remarkable foresight that "only with the coming of socialism will a rapid, real, truly mass forward movement in all spheres of social and personal life begin, involving the participation of the majority, and later of the entire population." (Collected Works, Vol. 25, p. 443). In posing and solving history-making objectives in the development of socialist society, the Communist Party and the entire Soviet people base themselves on the eternally vital teachings of Marxism-Leninism, upon the theory and practice of scientific communism, for which nothing is impossible.

In the course of the upbuilding of socialism, the Soviet state, transforming Lenin's ideas of national economic planning into reality, has accumulated an immensely rich experience in accelerated development of the economy and of culture based on the fulfillment and overfulfillment of the Five-Year Plans. The 20th Party Congress noted the need to develop long-range plans for longer terms of years, an undertaking that is completely in accord with the current level of development of the national economy and the gigantic scope of the work ahead in the period of transition from socialism to communism. The major directions and objectives of the 15-year plan were provided a rationale in the report of Comrade N. S. Khrushchev at the meeting of the USSR Supreme Soviet devoted to the 40th Anniversary of the Great October.

The prospects of development of the USSR national economy during the next 15 years envisage that during that period the decisive branches of Soviet industry will raise their output by more than 2 to 3 times. By comparison with 1957, the output of iron ore will increase approximately 3.5-fold, that of petroleum 4-fold, production and recovery of gas by 13-15 times, the production of pig iron and steel by 130%, that of electric power by 330%, that of cement 4-fold, etc. In agriculture, a further mighty upsurge in all its branches is envisaged, and this will assure an abundance of products and complete satisfaction of the basic necessities for the Soviet people. The long-range plan of development of the national economy during the next 15 years is an economic program for the upbuilding of communism in the USSR.

During the next 15 years the USSR will reach first place in the world not only in total volume of production but in production per head of population. Our country will establish the material and technological foundations for communism, and this will also signify a major triumph on the part of the Soviet Union in peaceful economic competition with the most advanced capitalist countries.

The establishment of the material and technological basis for communism will be a triumph of the Soviet state of significance in world history. This will be done by establishing large-scale industrial and agricultural production based on electrification of the entire country, all-round mechanization, automation and chemicalization of production, upon wide use of atomic energy for the peaceful development of the national economy, directed by highly-skilled and cultured toilers of the Soviet society.

The Seven Year Plan for 1959-1965 is a most important component of the program for development of the productive forces of the Soviet Union during the next 15 years laid out by the Communist Party, and will signify the country's entry upon a new stage in history — the stage of advanced upbuilding of the communist society. The major objectives of this period, the theses state, will be those of all-round establishment of the material and technological basis of communism, the further strengthening of the economic and defensive powers of our country and at the same time the ever more complete satisfaction of the growing material and spiritual needs of the Soviet people. This will be the decisive stage in the competition with the capitalist world, when the historical problem of catching up with and surpassing the most developed capitalist countries in production per head of population will have to find practical solution.

A major goal of the Seven Year Plan is the further mighty upsurge of all branches of the Soviet economy on the basis of preferred rise in heavy industry, reinforcement of the country's economic potential and the realization, on this basis, of a significant upsurge in the living standard of the Soviet people. The Seven Year Plan is based on profound qualitative changes in all branches of the national economy, which is developing on the basis of technological progress and the immense achievements of Soviet science and engineering. Realization of the Seven Year Plan for 1959-1965 will mean a new leap to a qualitatively higher condition of the socialist economy. An essential condition for the successful fulfillment of the Seven Year Plan and a major factor in the planned rise in production is the unswerving and all-round elevation of the productivity of social labor based on the advantages of the socialist organization of the economy, the large-scale introduction of equipment, complex mechanization and automation and increase in the skill of personnel.

More than a quarter century ago, Vladimir Ilyich Lenin foresaw, with true genius, that we would succeed in overtaking other states at a rate of which they were incapable of conceiving. "We have learned to understand," said V. I. Lenin, "what time means. And it is important that we study this even further." (*Collected Works*, Vol. 33, p. 355). True to the heritage of Lenin, the Communist Party guided itself, in the elaboration of the Seven Year Plan, by the objective necessity of gaining time in the peaceful economic competition with the capitalist system, and of accelerating to the maximum the rates of development of the Soviet economy and particularly of those branches of production making for a further rapid upsurge of the entire national economy and hastening the solution of the main economic problem of the USSR.

The draft of the control figures for development of the national economy of the USSR in 1959-1965 was created on the basis of the Leninist principle of democratic centralism which assures broad creative participation of the masses of the working people in the administration of the economy. Data for the Seven Year Plan were developed in the localities, at the enterprises and construction sites, with consideration of the numerous suggestions by workers, collective farmers and engineering and technical personnel. The proposals developed in the Union republics were based on the drafts of the national economic councils, which generalized the data from the localities. The draft of the control figures advanced for examination at the 21st Party Congress by the Central Committee of the CPSU and the Council of Ministers of the USSR was prepared by the State Planning Commission of the USSR with direct participation by the Union republic Councils of Ministers, the ministries and departments, the Academies of Sciences and other scientific institutions. Thus, the draft for the control figures is the fruit of mass experience, the collective wisdom of the Party and the people. In advancing the theses of Comrade N. S. Khrushchev's report for broad discussion prior to the Congress, the Party is again, as in the past, consulting with the people, and drawing upon the inexhaustible sources of creativeness in the masses.

The control figures for 1959-1965 envisage high rates and the required proportions in the development of the national economy of the USSR. Moreover, particular attention is given to the further utilization of the incalculable natural resources of the eastern districts of the country.

In the development of socialist industry, the drafting of the Seven Year Plan as a whole is based upon the following indices for major branches of the economy. Gross industrial production in 1965 will be approximately 80% higher than in 1958, of which production of means of production will rise by 85-88% and that of consumer goods by 62-65%. The average annual increase in gross industrial production for 1959-1965 as a whole will be approximately 8.6%, including 9.3% for Department I of social production and about 7.3% for Department II. The absolute value of this increase may be judged from the fact that in 1952 one per cent of rise in gross industrial production (not counting small subsidiary industries) represents 5 billion rubles, in 1959 it will be about 11 billion rubles, and in 1965 will rise to approximately 19 billion rubles. The average annual increase in industrial production during the forthcoming seven-year period will be about 135 billion rubles as against 90 billion in the prior seven-year period.

What do these figures demonstrate?

In the first place, they constitute a new and striking testimony to the unswerving adherence of the Communist Party to the Leninist general line of primary and preferential development of heavy industry as the underlying foundation of the socialist economy, the reinforcement of the cou try's strength and the uplift of the well-being of the Soviet people. This Leninist general line, confirmed by all the practical experience of progress toward communism, has always been the guiding principle of the economic policy of the party and is a decisive factor in the impetuous development of the productive forces and the continuous increase in the productivity of social labor, which is the mo important condition for the building of communism.

In the second place, these figures are a visible demonstration that the high rates of development of the national economy of the USSR have always been and now constitute a vast advantage possessed by the socialist economic system. No matter what the slaverings of the learned lackeys of capitalism and its revisionist myrmidons on the inevita "damping out" of the rates of progress of the USSR nation economy, their idle dreamings cannot change the actual situation.

We know that when the Soviet Union, having regained the 1913 level of industrial production, proceeded to carry out the First Five Year Plan, it lagged behind the most advanced capitalist countries by approximately 50 to 100 years. However, despite the colossal destruction of the second world war, the USSR exceeds such advanced capita ist countries as England, West Germany and France in th absolute level of production of pig iron, steel, coal, electr power, cement, lumber, sawn lumber, cotton fabrics and certain other types of industrial products. In certain important types of industrial and agricultural production as for example, woolen fabrics, sawn and dressed lumber, th production of butter, the harvest of wheat, sugar beets an potatoes, the USSR has surpassed the level of the USA. The superiority of the Soviet Union in rates of growth of production creates a real foundation for catching up with and surpassing the per capita production of the United Sta of America within approximately five years subsequent to 1965.

In the third place, the planned program of further industrial development of the USSR shows that in the most important fields the Seven Year Plan will provide not only n rates, but an enormous and constantly rising absolute increase in the output of industrial products. This is borne witness to, for example, by the following comparative da on mean annual increases in the production of ferrous metals and the mining of iron ore (million tons):

	1952-1958	1959-1965
Pig iron	2.5	3.6- 4.4
Steel	3.4	4.4- 5.1
Rolled products	2.7	3.2- 3.9
Iron ore (marketable)	6.2	9.0-10.3

In the last few years the USSR has overtaken the USA only in rates of growth but in absolute annual increase in the production of many types of products, including iron ore, pig iron, steel, petroleum, coal and cement. Realization of the Seven Year Plan will mean that in 1965 our co try will, in the absolute output of certain most important types of production exceed and in others it will approach the present level of industrial production in the United States of America. By that date the production of the most important products of agriculture as a whole, and per head of populati will exceed the present level of the United States of Americ

An important place in the control figures is given to the accelerated development of ferrous and nonferrous metallurgy so as to provide a more complete satisfaction of the rising needs of the national economy. It is planned in 1965 to smelt 65-70 million tons of pig iron, or 65-77% more than in 1958; 86-91 million tons of steel, or 56-65% more, and to roll 65-70 million tons of metal, or 52-64% more than in 1958. The production of aluminum will increase to about 2.8 times its present level, and that of refined copper to 1.9 times this year's output. There will be a considerable rise in the production of nickel, magnesium, titanium, germanium, silicon and also other nonferrous and particularly the rare metals. This increase in metal production will come about due to expansion of the capacities of the existing plants, by construction of a powerful third metallurgical base on the basis of the new iron ore deposits discovered in recent years in Siberia and Kazakhstan, by the use of the rich nonferrous metal ores deposits in Kazakhstan, Central Asia, the Urals and the Trans-Baikal. At the same time, considerable importance will attach to the utilization of the iron ore resources of the Kursk Magnetic Anomaly and the Ukraine, and of the supply of raw materials in districts of the Kola Peninsula.

The output of products of the chemical industry is to rise virtually to three times its present level in the coming Seven Year Plan, including a rise in manufacture of artificial fibers to 3.8-4 times the present level, and of plastics and other synthetics to 6.7 times the present level. The Communist Party gives special attention to the accelerated development of the chemical industry as a most important factor in satisfying the needs of the entire national economy including the production of consumer goods. During the seven-year period, more than 140 larger enterprises of the chemical industry will be built or completed, and over 130 enterprises will be rebuilt on the basis of extensive utilization of the achievements of science and technology in our country and of experience abroad.

One of the distinctive characteristics of the seven-year program is the significant structural changes that will occur in a number of branches of industry. Specifically, the plan envisages a basic reconstruction of the fuel-and-power balance of the country. The share of petroleum and gas in the total volume of fuel production is to rise from 31% at the present time to 51% in 1965. In connection therewith, petroleum recovery is to rise more than twofold in the seven years, and gas recovery and manufacture by approximately 5-fold. Coal mined is to increase by 20-23%. The production of electric power will rise by 2-2.2 times and attain 500-520 billion kwh, and this will signify a new and decisive step in the realization of Lenin's idea of the all-out electrification of the country.

It is most important that the forthcoming seven year plan envisages preferential construction of fuel-powered electric power plants using cheap coals, natural gas and heavy oil, as well as realization of work to create a single power grid for the USSR, The economic efficiency of this trend in electrification is obvious. The preferential construction of fuel-powered electric power plants will make it possible, during the seven-year period, to build about 10 million kw. of extra electric power capacity by reducing capital investments in hydroelectric plants. If the ratio between fuel-powered and hydraulic electric power plants established in the previous years were maintained, it would be necessary either to reduce the amount of capacity to be installed or to increase capital investments for power development by 23 billion rubles. Atomic power plants with various types of reactors will also go into operation.

The machinery industry will undergo further rapid development. The problem of developing a material and technological basis for communism requires realization of complex mechanization and automation of the production processes, and this makes it necessary to expand the production of the more modern machines, machine tools, instruments and various types of complex equipment. Technological progress in all branches of the economy, a basic improvement in production techniques, and broad development of socialist competition will result in a considerable increase in the productivity of social labor (by approximately 50% in industry, and by 60-65% in construction) and reduction in the cost of industrial production in comparable prices by approximately 11.5%. This will make it possible to improve conditions of labor and carry out a further systematic reduction in the length of the working day.

The planned development of the machinery industry will require a considerable improvement in the specialization and coordination of production, the replacement of and modernization of outdated equipment at the enterprises of the machinery industry, and improvement in the technological processes of production. The execution of these measures will make possible, without the building of new enterprises, a considerable increase in the production of turbines, generators, steam boilers, tractors, Diesel engines, electric locomotives and other machines.

The control figures envisage a substantial increase in production in the forestry, paper and woodworking branches of industry, and these are of considerable significance to the development of the economy and culture of the nation. Specifically, furniture production will rise 140% over the 1958 level, that of paper by 60%, while within the latter figure newsprint will increase 80%.

At present we have established conditions making possible, in the nearest future, an even greater increase in industrial products and foodstuffs, and also in household goods so as more completely to satisfy the continually rising material and cultural requirements of Soviet society. In the course of the Seven-Year Plan, the needs of the populace for fabrics, clothing, shoes and other commodities will be adequately met. The gross production of light industry will rise by approximately 50%, and that of the food industry by 70%. The basis for this growth will be the unswerving rise in agricultural production. These rates of increase in the production of fabrics, clothing and shoes will make it possible for the USSR, at the end of the Seven-Year period, to approach the level of the USA both in production of these commodities and in output per head of population. In level of production of a number of the most important foodstuffs per head of population, the USSR will catch up with and surpass the most developed capitalist country. Special attention will be given to improving the quality of industrial goods and foodstuffs in every possible way. All this bears witness to the unflagging concern of the Communist Party for the welfare of the people.

The theses emphasize the significance of all-round mechanization and automation of production, and of specialization and coordination of industry. Our national economy is a unified and complex organism. The proper coordination and interaction of its individual parts governs the planned nature of, the maintenance of proper proportions, and efficiency of the development of the economy as a whole. The control figures envisage extensive measures toward the further complex development of the economic districts on the basis of the most efficient utilization of natural resources, with consideration for the need of specialization not only in industry but in other branches of the national economy as well, improvement in coordination and elimination of irrational cross-hauls.

Basing itself on the boundless support and creative activity of all the working people, the Communist Party has conducted a vast organizing and political activity, has defined the most pressing problems of development of agriculture, and has headed the national struggle for realization of the program for a sharp upsurge in agriculture outlined by the September Plenum of the Central Committee of the CPSU.

Realization of that program made it possible within a short time to overcome the lag in agricultural production, to reinforce the economics of the collective farm, and significantly to increase the production and purchasing of agricultural products, and this has a favorable effect upon the rise in the living standard of the Soviet people.

Truly gigantic objectives have been placed before Socialist agriculture in the next seven years. The control figures envisage growth in agricultural production on a scale that will permit satisfaction of the needs of the population for the most important food products in broad assortment and of high quality, and the requirements of industry for agricultural raw materials. Translated into the language of numbers, this means that the gross production of agriculture will have to rise by approximately 70%, including an increase in grain output to 10-11 billion poods, that of sugar beets to 70-78 million tons, that of raw copper to 5.7-6.1 million tons, and that of meat (slaughterhouse weight) to not less than 16 million tons, while that of milk will rise to 100-105 million tons.

The control figures define the main direction in the development of agriculture during the next seven years. They set forth correct proportions in the development of the most important branches of agricultural production, with consideration for satisfaction of the growing requirements of the population and of the country as a whole for food products and agricultural raw materials.

Attainment of the indicated level of production postulates the need for a sharp rise in the harvest yields of all agricultural crops and a further increase in productivity of livestock in social ownership.

The most important synthesizing index of the functioning of agricultural enterprises — collective and state farms — is production per 100 hectares of agricultural arable land, as this is descriptive of the utilization of the land as the basic means of production. The Seven-Year Plan envisages the attainment of a level of production of the major agricultural products per 100 hectares of arable land, that will surpass the present level of production of these products in the United States by the same standard (in centners).

	USSR 1965	USA 1957
Grain	329-360	280
Potatoes	294	19
Sugar	18.5-20	4.1
Meat (slaughterhouse weight)	32	29
Milk	200-210	101
Wool	1.1	0.2

This table is visible evidence of the fundamental advantages of large-scale socialist agricultural production.

The Seven-Year Plan projects realization of a number of most important measures to increase the harvest yield of farm crops. High and stable harvests can be obtained only by introduction of a scientifically founded system of agriculture based on the conditions of the various economic zones of the country and of each farm enterprise, and on further specialization and improvement in the distribution of agricultural production. Introduction of a correct system of conducting farming is a matter of major importance to the government. The introduction of chemistry into agriculture w also undergo further development. The delivery of minera fertilizers to agriculture will treble in 1965, and there wil be an increase in the supply of chemical means to the collective and state farms to combat vermin and plant diseases, as well as weeds. In the seven years agriculture w obtain more than a million tractors, about 400,000 grain combines and many other machines and equipment. Work for the further electrification of agriculture will take on broad scope: the electric power requirement here will ris approximately 4-fold.

All-round increase in grain production will continue to the main line of development of agriculture in the period ahead. Siberia, the Urals, the Volga regions, and the Kaza Soviet Socialist Republic will continue to be the main producers of market grain. In the Ukraine, the North Caucas and the Central Black Earth zone, the development of the grain economy should be accompanied by a considerable increase in the production of industrial crops and in high-yield stock-raising. The possibility of this type of rationa specialization in agriculture is intimately related to the mastery of the virgin and idle lands.

Mastery of virgin lands is not merely a quantitative increase in sown acreage, but a qualitative leap in the devel ment of agriculture and of the Soviet economy as a whole, making for solution of a number of problems of the greate importance to the national economy, and having major pol ical and economic significance.

The mastery of the virgin lands made it possible consic ably to improve the grain supply to the population of our country, to increase grain reserves and to assign the requisite amount of grain to export. At the same time, th most important measure makes it possible to carry out th decisions adopted by the 20th Congress of the Party relat to the most desirable regional distribution of various bra of agriculture, i.e. improvement in specialization on the of the farming districts.

During recent years, the publicly-owned stock-raising the collective and state farms has been placed on a new qualitative foundation and has rapidly climbed. This is al a result of the production of billions of additional poods grain from the virgin lands and of the sharp rise in plant of corn, which is the main source of a firm supply of fee for stock-raising. The planned increase in grain product will make it possible to allocate 85-90 million tons of co centrated feed to cattle in 1965.

Serious objectives have been set in the field of develop ment of publicly-owned stock-raising. The planned rise the production of livestock products will require a signif cant increase in the productivity of cattle and a very sha rise in the head of farm animals and fowl. The decisive condition for fulfillment of the plan in the field of stock-raising is the all-round development and expansion of th fodder supply, particularly by increasing plantings and i proving the crop yields of corn as the most valuable fod crop.

The Party poses the objective of creating an abundanc agricultural products. This is one of the most important conditions for the transition to communism. This proble is capable of solution only on condition of a proper reali tion of the principle of the material interest of the colle tive farms in increasing the production of farm products It is capable of solution on the basis of such economic r tionships between government and collective farm as wo stimulate an increase in labor productivity and a rise in the production of farm products.

"The historical significance of the Party's decisions i the reorganization of the Machine and Tractor Stations, new purchasing procedure and single scale of prices," said Comrade N. S. Khrushchev in his report at the December Plenum of the Central Committee of the Communist Party of the Soviet Union, "lies in the fact that it marks the beginning of a new stage in the economic relations between the government and the collective farms. The principle of voluntary sale of products will gradually be extended to all branches of the economy. Let us take grain as an example. This year the government acquired 3.5 billion poods of grain. If next year the collective and state farms raise a good crop and the government purchases the same amount of grain and increases its reserves even further, it will apparently be necessary in 1960 to buy not over three billion poods of grain and perhaps less.

"Where will we buy our grain then? Where it's cheaper."

The same applied to other farm products. Consequently, it will be impossible to run a farm without profound and all-sided analysis of the cost of the products raised, without monitoring by means of the ruble.

Today, in agriculture as in all branches of the economy, questions of increasing labor productivity and cutting expenditures of labor and materials upon the production of a unit product have come to the fore. It is proposed to increase labor productivity in the collective farms during the seven years by approximately 100%, and by 55-60% in the state farms. Each collective and state farm must not only assure production of the largest possible amount of produce from the land assigned to it, but must run its business economically, with the wisest possible utilization of all possibilities and the most strict adherence to economies. This is the foundation on which there will be assured an undeviating reduction in prices for agricultural products and further increase in the well-being of the masses of the people.

The rise in farm production and the increase in labor productivity will cause the real income of the collective farmers to increase by not less than 40% in the seven year period, chiefly due to increase in the social production of the collective farms.

Governmental capital investments in agriculture are envisaged as totalling about 150 billion rubles. The increase in the incomes of the collective farms as the result of increase in the marketable output of agriculture and stock-farming will make it possible for them to make major capital investments out of their own means. According to preliminary calculations, the collective farms will be able, in 1959-1965, to expend 250 billion rubles upon the erection of farm buildings, living quarters and structures for servicing the population's needs, and upon civic improvements in the villages, and 95 billion rubles upon the purchase of equipment.

Thus, the total volume of capital investments in agriculture in 1959-1965 by the government and the collective farms will be about 500 billion rubles and will almost double the investments made in 1952-1958.

As emphasized in the theses for Comrade N. S. Khrushchev's report, further development of agricultural production will be accompanied by improvement in the socialist relationships of production, and by approximation of the two forms of socialist property, collective farm and public. This will manifest itself in the further development of the collective farming system, in the growth of productive equipment, in increase in the indivisible funds of the collective farms and the correct utilization thereof, in expansion of inter-collective-farm production ties by joint organization of industrial, construction and other economic measures, joint building of power plants, roads, irrigation and drainage systems, enterprises to process and storage agricultural products, schools (particularly boarding schools), homes for the aged, hospitals and community centers.

As collective farm production develops, under conditions in which the collective farms have become major enterprises equipped with advanced technology and possessing skilled personnel, the material and household needs of the collective farms will come to be satisfied in ever increasing degree by the public economy, and therefore the personal garden-plot-farms of the collective farmers will gradually lose their significance.

All this will accelerate the process of development of collective-farm and cooperative property, will increase the level of socialization of collective farm production, and will make for approximation of the general public and collective farm-and-cooperative forms of social public property.

In the theses on the control figures for 1959-1965 much attention is given to questions of fundamental technical reconstruction of the major forms of transportation in our country. This is understandable inasmuch as the growth in industrial and agricultural production will be accompanied by a considerable increase in hauls and freight turnover.

Fulfillment of the seven-year program of development of the national economy of the USSR will require enormous capital investments on the part of the government. They will constitute (in comparable prices) 1,940-1,970 billion rubles. This is virtually equivalent to the volume of capital investments in the national economy during the entire existence of the Soviet government. Moreover it has been calculated that in 1959-1965 the collective farms will be able to set aside 345 billion rubles for capital investment. Thus, the total capital investments in the forthcoming seven years will considerably exceed 2 trillions of rubles. A significant portion of these means will be expended upon new construction, particularly in the eastern districts of the country. In addition, very large funds will go to the completion of construction jobs already under way, upon the reconstruction and expansion of enterprises in operation, and upon replacement of their equipment. This will make for higher economic efficiency in capital investment, more rapid amortization thereof, inasmuch as the reconstruction of enterprises already in existence requires smaller monetary and material outlays and will make it possible to increase production more rapidly than by building new enterprises.

The most important demand made upon the planning and economic bodies is that the planned program of capital construction be carried with a maximum economy of means. This makes necessary a careful and all-sided approach to estimates of the economic effectiveness of the investments made, and elimination of all excesses, refusal to permit dissipation of resources and the freezing thereof, and reduction of the periods required for construction in every possible way. It suffices to say that a reduction in the estimated cost of assembly and construction by a single per cent yields an economy of over a billion rubles. The problem of the economic efficiency of capital investments must always be the center of attention of the planning and business offices and of the scientific research institutions. The work done by the All-Union Conference on the Economic Efficiency of Capital Investments, held in 1958, will doubtless represent a significant contribution to the theoretical elaboration of this problem. But it has to be said forthrightly that all that has to be done has not yet been done by any means. Moreover, unity has not yet been established as to problems of methodology in determining the economic efficiency of capital investments and that, as it were, testifies to the pressing necessity to continue a study of the problem and to attain a correct and all-round solution thereof.

About 20% of the designated total of government capital investments will be channeled into housing and civic construction, into the building of structures for education, culture and public health. In this connection it is necessary to emphasize that the rise in the living standard of Soviet people will be reflected not only in increase in the monetary wage of the working people and increase in its purchasing power. The government assigns enormous funds, greater every year, to social and cultural matters. In 1940 expenditures toward these ends under the government budgets of the constituent republics (totalled for the USSR) came to 28,004 million rubles, in 1950 to 63,157 million rubles, and in 1957 to 116,683 million rubles. The increase in the funds for public consumption expended for social and cultural purposes influences the level of material well-being and the spiritual development of the Soviet people to the highest degree. Even Marx, in writing of funds for the joint satisfaction of the needs of society, foresaw the progressive significance of the fact that under socialism this fraction of the total social product "would undergo an immediate significant rise relative to its magnitude in modern [capitalist — Editor] society, and that it will continue to grow with the development of the new society" (K. Marx, F. Engels, Selected Works, Vol. II, p. 13, 1955). The Communist Party is bending every effort to assure a rapid rise in the satisfaction of the social and cultural needs of the population, the development of education, public health and housing and civic construction.

The Seven Year Plan will introduce significant changes into the territorial distribution of the productive forces of the country. Over 40% of the total volume of capital investments is directed to the development of the Eastern districts of the country, including the Urals, Siberia, the Far East, Kazakhstan and Central Asia. The share of the eastern districts in the Union-wide production of the most important types of products will rise and will constitute, in 1965, about 43% of total pig iron output, 47% of the steel melted, 48% of the rolled metal, about 50% of the coal, 30% of the oil, 46% of the electric power production, and over 45% of the sawmill products. A number of other measures will also be carried out to improve and better the distribution of the productive forces of Soviet society.

These measures are based on Lenin's concepts of the need for a rational distribution of industry and other branches of the national economy, with consideration of accessibility of raw materials and the possibility of attaining minimum loss of labor in the transition from the processing of raw materials to all subsequent stages in the treatment of semi-finished items up to the production of the final product. These Leninist precepts are being given further creative development in the Seven Year Plan. The objectives envisaged in the control figures will make for further specialization and the complex development of the economies both of the republics and of the large economic geographic districts (i.e., the Urals, Siberia, Central Asia, the Trans-Caucasus, etc.). It is necessary in this connection to struggle decisively against a localist concept of a complex economy as an autarchic economy. The singling out of the major economic geographic districts in the planning process makes for proper geographic distribution and the most economical territorial organization of the national economy of the Soviet Union.

The plan for the distribution of the productive forces of the USSR in the upcoming Seven Year Plan is totally in accord with the principles of Leninist nationality policy calling for the all-round and completest possible development of the economies and cultures of all the nations and nationalities populating the USSR. The control figures for 1959-1965 take into consideration the need for a further upsurge in the industry and agriculture of all the constituen republics, thus assuring a rational division of labor among the economic administrative districts of the country.

V. I. Lenin noted that socialism will mean "planned organization of the process of social production so as to provide for the well-being and all-round development of all members of society..." (Collected Works, Vol. 24, p. 430). The object of socialist production is the most complete satisfaction of the continually rising material and spiritual needs of society.

In advancing production, the Communist Party holds true to the Leninist principle, verified by life, of the personal material self-interest of workers in the results of their labor. Adherence to this principle is an important stimulus to improvement in the productivity of the labor of society and to growth in production. A proper distribution of the products of the labor of society among all its working persons, on the basis of the economic law of distribution in accordance with labor contributed, is one of the basic distinctions between socialism and capitalism.

The founders of Marxism-Leninism have repeatedly emphasized the importance of the principle of material self-interest on the part of all people who work for their livelihood in a rise in social production so as to create an abundance of products, thus facilitating the transition to communism, and in their day subjected the equalitarian approach to distribution to devastating criticism. K. Marx in his Critique of the Gotha Program and a number of other works, F. Engels in Anti-Duehring developed the fundamental principles involved in the mode of distribution under socialism. V. I. Lenin in his famous work, State and Revolution, and in a number of other works elaborated a rigorous teaching on the principles of distribution under socialism and provided a fundamental exposure of the reac tionary petty bourgeois essence of the demand for equalitarianism in distribution and demonstrated that "until the 'higher' phase of communism appears, socialists demand the strictest control by society and by the state over the standard of labor and the standard of consumption..." (Collected Works, Vol. 25, p. 441).

Distribution in accordance with need is possible only under the higher phase of communism, when the productiv forces of society attain a higher level of development than under socialism and when all the members of society will labor in accordance with their needs, and their labor will become even more highly productive. Only under these co ditions will an abundance of consumer goods be attained, and will the transition from the socialist principle of distribution in accordance with labor to the principle of communism: each according to his abilities, to each according to his needs" occur.

In the control figures for 1959-1965 provision is made f a number of major undertakings directed to further elevation of the well-being of the Soviet people.

During the coming seven-year period there will be a pronounced rise in the production of consumer goods and considerable improvement in the supply of foodstuffs and industrial goods to the population. In 1959-1965, 15 millio apartments providing a total of 650-660 million square meters of space will be built by government capital investments and the funds of the populace assisted by governme credit, in cities and urban settlements, and in the housing developments of state farms, Repair and Equipment Statio and forestry camps. In the villages, the collective farmer and the village intellectuals will build about 7 million hom This will constitute a major contribution to the solution o the housing question. The real incomes of the workers a office workers will rise on the average by 40% per worke and those of collective farmers by not less than 40%. Of great importance will be the gradual correction of the wage situation, the planned increase in the monetary wage of low-paid workers and office workers from 270-350 rubles to 500-600 rubles per month, and the rise in the minimum pension level. The objective is posed of considerably expanding the system of public feeding enterprises, of improving their work and of cutting prices for the production of these enterprises. This will have a favorable effect on the budgets of workingclass families in the first place and will ease the labor of millions of women. In 1960 it is planned to complete the introduction of the 7-hour working day for working people and office workers, and by 1962 to realize a shift from the 7-hour work day to the 40-hour work week. Starting in 1964, a gradual transition to a week of 30 to 35 hours will begin.

In recent years our country has seen the execution of important measures directed toward the strengthening of the economic power of the Soviet state, the further uplift of industry and agriculture, the flourishing of science and technology, a steady rise in the well-being of people, the development of socialist society, and the reinforcement of the alliance between the workers and peasants, and the friendship of the peoples of the USSR. These measures, developed and realized by the Party, are not only of practical but of the very greatest theoretical significance. The Party is boldly laying new paths into the future. And living Marxism-Leninism in action is manifested in all of this, as is the indissoluble unity of theory and practice, and the further enrichment of theory by the experience of the upbuilding of communism.

In a creative development of Marxism-Leninism, the Party is conducting a decisive struggle against those who have chained themselves to old and outdated forms and methods of work, who are infected with conservatism and resist the execution of the Leninist general line of the Party. The June Plenum of the CC CPSU has exposed and routed the anti-Party group of Malenkov, Kaganovich, Molotov, Bulganin and Shepilov, which had lost contact with the people, opposed its vital interests, and which conducted a struggle against the Leninist general line of the Party, and against the political course adopted by the 20th Congress of the CPSU, against the leading role of the Party, and had slid onto the path of factional and divisive activity. The anti-party group had spoken out against such timely and essential measures as the plowing of the virgin and abandoned lands, the reorganization of national economic planning particularly in the field of agriculture, the reorganization of the administration of industry and construction, the extension of the rights of the constituent republics and the local Party and Soviet organs, and against the measures taken by the Party toward further improvement in the well-being of the working people, and also against the Party's line in foreign policy, having the objective of easing international tensions, of reinforcing the cause of peace, and of developing collaboration and strengthening friendship among the peoples. Today everyone can see how shamefully this contemptible group of miserable factionalists has failed. Today everyone knows in what direction their factional work was driving the Party by their efforts to revise the Leninist general line of the Party in fundamental aspects of the development of our country. Tossing the anti-Party group out of its path, our Party has strengthened the Leninist unity of its ranks even further, and has united it even more closely under the great banner of Marxism-Leninism.

As pointed out by Comrade N. S. Khrushchev, the Seven Year Plan for the development of the national economy is a "living embodiment of the Leninist concepts of the upbuilding of communism in our country, and of the all-conquering force of Marxism-Leninism. This plan is a new, decisive blow against bourgeois ideology, and against international reformism and revisionism."

The international significance of the Seven-Year Plan is exceptional. It serves as an inspiring example of the building of a new life and demonstrated to the working people of all countries that socialism is winning in all fields of the economy and culture in its peaceful competition with the capitalist system. The Seven-Year Plan envisages the all-round development of the economic collaboration between the USSR and all socialist countries. The law of planned economic development is operative in the world socialist system.

Further international specialization and coordination of production by comradely collaboration in plans of inter-related branches of the national economy will mark a new stage in the development of the international division of labor in the socialist countries. A rational distribution of production under which there is a harmonious combination of the national interests of each socialist country in the interests of the reinforcement and development of the entire socialist camp is one of the most important sources of acceleration of rates of increase of the productive forces of all the socialist countries. The result of the fulfillment of the Seven-Year Plan will be that the share of the USSR and of the entire system of socialist states will become dominant in world industrial production. Calculations show that in 1965 the industrial production of the socialist countries will constitute more than half of world industrial production. This is a fact of enormous historical significance. The day is not far distant when the world socialist economic system will surpass the capitalist economic system in the sphere of material production and will guarantee absolute superiority thereafter.

The transition to communism requires the creation not only of a powerful foundation in material goods and technology, but the attainment of a high level of consciousness on the part of all members of socialist society. Both the theses of Comrade N. S. Khrushchev's report and the theses of the CC CPSU and the USSR Council of Ministers, "Strengthening the Ties of the Schools With Life, and Further Development of the System of Public Education" elaborate questions of the further training of persons of a communist society of rounded development and training.

Realization of the grandiose plan of the upbuilding of communism requires a decisive improvement in all work in the education of Soviet people, an uplifting of their communist consciousness and activity, the shaping of a new man in the spirit of collectivism and love of labor, recognition of social duty, possession of the spirit of socialist internationalism and patriotism, and in the spirit of observance of the high principles of the morality of the new society. Liquidation of the existing difference between town and country, and of the distinction between physical and mental labor, which is a necessary condition for the transition to communism, is an economic problem. But its solution presupposes a considerable rise in the communist consciousness of all members of society and a strengthening of the inculcation of a communist attitude toward labor. The essence of planned reorganization of the middle and higher schools lies in the combination of study with productive labor, based on an improvement in the level both of studies and of the upbringing of the rising generation in the spirit of communism. This flows in its entirety from concepts advanced by the classical Marxist-Leninists. In his day, Marx pointed out that one of the most powerful means for reorganizing modern society is an early joining of productive labor and study. Lenin's Data for a Re-examination of the Party Program contains the requirement of free and obligatory general and polytechnical training (which would familiarize with theory and in practice with all the major branches of production) for all children of both sexes up to 16 years of age, and an intimate connection of teaching with socially productive work by children (Collected Works, Vol. 24, p. 435).

The Seven-Year Plan for 1959-1965 provides for a considerable expansion of public education. The number of students in the primary, seven-year and high schools in 1965 will rise to 38-40 million, as against 30 million in 1958. A considerable increase is to take place in the number of students in schools for workingclass and rural youth and in trade and technical schools, as well as in schools for adults. The number of pupils in boarding schools will be not less than 2.5 million in 1965 as against 180,000 in 1958, or in other words a 14-fold increase will occur. The number of individuals to be graduated from higher educational institutions in 1959-1965 will be 2.3 million as against 1.7 million in 1952-1958.

The planned reorganization will raise the role of the middle and higher school in the education and the communist upbringing of the youth, and will make better provision for the training of highly-skilled workers for all branches of the national economy, science and culture. This will make for successful realization of the stupendous creative plans for the period of the all-out upbuilding of communism in the USSR.

During the next seven years, the requisite conditions will be established for an even faster development of all branches of science, and for the realization of important theoretical investigations and new, major scientific discoveries. Major problems have been posed before the workers in the social sciences. They have the job of creating fundamental works generalizing the laws of social development and the practice of the upbuilding of socialism, and of developing problems related to the gradual transition to communism. A most important problem of workers in the social sciences is criticism of contemporary revisionism and bourgeois ideology, and active struggle for the purity of Marxist-Leninist theory. As has been emphasized in the theses for the report of Comrade N. S. Khrushchev, under the present conditions of development of the national economy of the USSR, successful reorganization of the administration of industry and construction, the development and strengthening of the collective farm system, and increase in the labor activity of the people, there is a rise in the significance of the science of economics, and this has to be intimately related to the planning of the national economy and the overall practice of the upbuilding of communism.

The grandiose problems of development of the national economy laid out in the Seven-Year Plan, imperatively demand the decisive improvement of the work of economists, and concentration of their attention and strength on the elaboration of the fundamental economic problems flowing from the program of the upbuilding of communism and the intimate relation between theoretical economic investigations and practice. The further elaboration of problems of the development of economics in the period of advanced upbuilding of communism, the creation of the material and technological foundations of communism, investigation of the scientific foundations of long-range and current planning, profound study of problems related to expanded socialist reproduction, the distribution of the country's productive forces and increasing the economic efficiency of capital investments, investigation of methods of making further application of cost accounting, increasing labor productivity and reducing cost of production, and study and analysis of the new economic processes becoming effective in industry and agriculture: these and many other problems have to become the object of scientific elaboration. The science of economics is called upon to give active aid to the Communist Party and the Soviet government in guiding and fulfillin the economic program for the upbuilding of communism, and must serve the development and improvement of the political economy of socialism.

The solution of these responsible tasks before the science of economics requires correct planning of the investigations before us, the ability to select the most significant and unpostponable subjects, carefully-considered coordination of the efforts of all the scientific research institutions in economics and the appropriate departments in the higher educational institutions, as well as of economists engaged in Party work and practical work in the economy.

A broad pre-convention discussion of Comrade N. S. Khrushchev's theses on the control figures for the development of the national economy in 1959-1965 is in progress in the enterprises and at the construction sites, in the collective and state farms and in the press. Inspired by the magnificence of the new economic program of the upbuilding of communism, Soviet people are greeting the 21st Party Congress with new triumphs in production. Socialist competition is expanding, and ever more effective forms of struggle for a Communist attitude toward labor are arising in the course thereof, for further increase in its productivity, and for fulfillment and overfulfillment of production plans. A major creative initiative on the part of the working people of our country has been the creation at the industrial enterprises, in the collective and state farms, in transport and construction, of brigades of Communist labor In these brigades the working elements of Soviet society see that new and higher form of competition which has been prompted by life itself and corresponds most closely to the present period in the development of the country. To live, work and study in Communist fashion — this is the slogan and program of the Communist labor brigades that has arisen on the instance of the Leninist Young Communist League, and is supported by the Party and the people.

Soviet people look upon the Seven-Year Plan as somethin near and dear to them, as a point of application of all their efforts, their activity, enthusiasm and creative initiative. The Party and the people are as one in their deeds and idea Our motherland is moving along the path to communism lai out by Marx and Lenin. This movement is indomitable.

A. Arzumanyan:[*]

The Decisive Stage in the Economic Competition Between Socialism and Capitalism

Pre-Convention Discussion of the Theses of Comrade N. S. Khrushchev's Report CONTROL FIGURES FOR THE DEVELOPMENT OF THE NATIONAL ECONOMY OF THE USSR IN 1959-1965

The theses of the report by Comrade N. S. Khrushchev at the 21st Congress of the Communist Party of the Soviet Union reveal a magnificent program for the upbuilding of communism in our country. Soviet socialist society is in the full flowering of its creative forces, and is moving forward on the path to communism with a firm step and confidence.

For more than four decades, the forces of international imperialism have been employing all possible methods of struggle against the world's first socialist state: armed intervention and economic blockade, political isolation and ideological attack, diversive actions of all kinds, and world war. However, all these bestial attacks by the imperialist capitalist class have been repulsed by the Soviet people, resting on the support of the revolutionary forces of the industrial working class of the world.

From the first days of the October socialist revolution the leaders of the capitalist class predicted the speedy downfall of the young Soviet state. However, the Soviet power triumphed over the forces of counter-revolution at home and abroad. The great triumphs of October are today beyond argument and obvious to all.

Having been defeated in military intervention against the young Soviet republic, the capitalist class of the world started to console itself with the thought that the Soviet Union would never be able to eliminate its age-old technological and economic backwardness. However, in an historically brief period, the working people of our country transformed their homeland into a mighty power of industries and collective farms.

The enemies of socialism reiterated for many years that the socialist revolution would result in the destruction of civilization. Reality has refuted these fabrications. It was the Soviet Union and none other that saved world civilization from the threats of annihilation by the fascist barbarians.

The ideologists of capitalism have prophesied the impossibility of rapid reconstruction of the economy destroyed as the result of the second world war and the enemy occupation. But these forecasts also were proved wrong by life.

The Soviet people, overcoming all difficulties and obstacles in its path, created a powerful and blooming socialist economy. And no matter how the ideologists of the capitalist class sought to slander our socialist economic system, one thing emerged beyond challenge — its great achievements, significant in the very history of the world, and constituting the result of the inexhaustible spring of the people's energy, which is capable of flowing unhindered only in a society to which exploitation is foreign, in which man has for the first time become the true master of his life and fate.

The triumphs of the socialist economy and culture and the rise in the well-being of the people now make it possible for our country to enter a qualitatively new stage in its development, a most important phase in the competition with capitalism, in which a solution will be found, for all practical purposes, to the historic problem of overtaking and surpassing the most developed capitalist countries in production per head of population. Solution of this problem will signify a great triumph on the part of the USSR in the competition with the capitalist world. During the next 15 years our people will take first place in the world both in the total volume of industrial production, and in production per head of population, and will become the most economically powerful country on earth, the land with the highest living standard for its people. As early as 1965 the lands of socialism will manufacture more than half the industrial output of the world. This will solve the root problem of the present epoch — the question of "who will win out over whom" — in favor of socialism on a world scale.

The perspectives for the development of the national economy of the USSR during the coming 15 years envisage that, during that period, the decisive branches of Soviet industry will increase their production by more than 2- to 3-fold. The Seven-Year Plan is a component part of this magnificent program. In 1959-1965 a new leap to a qualitatively higher state of the socialist economy in its path of development to communism will take place, and there will be a considerable rise in the economic potential of the Soviet Union for further improvement in the well-being of the people. By fulfilling the Seven-Year Plan, the Soviet people will carry into life the bulk of the economic program calculated for the coming 15 years.

The following data will make it possible to judge the part played by the seven-year plan in the fulfillment of the long-range plan for the development of the USSR national economy during the coming 15 years. (See table on following page)

In examining the table it must be borne in mind that the goals for 1972 are preliminary and are most apt to be amended upward in connection with the surging development of modern science and technology and the further growth in the numbers of and rise in the skill of personnel.

The fulfillment of the seven year plan will cause the economy of the Soviet Union closely to approach the level required to overtake and surpass the United States of America in the production of all the major industrial and agricultural products per head of population. The socialist nature of our economy will make possible incomparably more complete and rational utilization of this production for the satisfaction of the material and spiritual needs of the population than in capitalist countries. As the result of fulfillment of the seven year plan, the Soviet Union will produce more industrial output per head of population than is now produced in the most advanced capitalist countries of Europe — England and West Germany. In 1965 the USSR will, in absolute output of certain most important types of

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Production of the Most Important Industrial Products in the USSR

	Unit of measurement	1958	1965 (under the Seven Year Plan)	1972 (according to the preliminary outline advanced by Khrushchev, Nov. 6, 1957)	% of 1972 goals to be attained in 1959-1965
Pig iron smelted	million tons	39.1	65–70	75–85	86.7–82.4
Steel melted	million tons	55	86–91	100–120	86.0–75.8
Electric power produced	billion kwh	233	500–520	800–900	62.5–57.8
Oil recovered		113	230–240	350–400	65.7–60.0
Gas recovery and manufacture	billion cubic meters	30	150	270–320	55.6–46.9
Coal mined	million tons	489.3	596–609	650–750	91.7–81.2
Cement production	million tons	33.6	75–81	90–110	83.3–73.6
Leather footwear manufacture	million pair	355	515	600–700	85.8–73.6
Sugar production	million tons	5.15	9.25–10.0	9– 10	100

products, exceed and in others will approach the present level of industrial production in the USA.

These major undertakings will be solved on the basis of the high rates of increase in production that are set forth in the control figures for the development of the USSR national economy for 1959-1965. The basic problem of the coming seven year plan, as has been emphasized in the theses of Comrade N. S. Khrushchev's report, is the problem of accelerated development of the national economy on the road to communism, and the problem of gaining the maximum amount of time in the peaceful economic competition between socialism and capitalism.

The decisive advantages of socialism in the competition of the two systems are revealed most clearly in examination of the ratios between the rates of growth of industrial and agricultural production in the socialist and capitalist countries.

In its rates of growth our country has long since taken first place in the world. Even in its best years the history of capitalism did not know rates as high and stable as those that have been and are now being developed by Soviet industry. The rapid rates of growth of socialist industry and the uninterrupted nature of the process of expanded socialist reproduction have made it possible for our country to eliminate its age-long technological and economic backwardness, to become a powerful industrial power, and in volume of industrial production to overtake all the lands of the earth except the USA. The advantage of socialism in rates of growth of production made it possible, in a brief period, despite the destructive wars forced upon our country by imperialism, markedly to reduce the gap in the economic levels of the USSR and USA.

In competing with the capitalist world, the Soviet Union does not at all proceed from the hypothesis that a cessation in the rise in capitalist production is to be foreseen. The theory of the "corking up of the productive forces" of capitalism is not a Marxist theory. The resolution of the basic economic task assumes the need to attain and surpass not only the present level of production per head of population in the USA and the other major capitalist powers but the level to which these countries may elevate themselves, even though this may be slow.

The time period required for solution of the basic economic task — approximately by 1970 or perhaps earlier — is determined from the hypothesis that during this period the social product of the USA will rise by 2% per year on the average. The methodology employed in determination of the average annual rate of growth of one or another capitalist country in the future requires consideration of the historical experience and conditions existing and foreseeable for the future. Under these conditions it is necessary that the period during which this structure and the given form of the national economy of the country came int being, be taken for purposes of comparison.

During the past 28 years as a whole, and during individu periods therein, the average annual rates of growth of industrial production in the USA have been, in %:

1929-1957	1943-1957	1948-1957	1953-1956	1953-19
3.2	0.9	3.6	2.2	1.6

The average annual rates of growth in industrial produc tion in the USA during the period 1929-1957 (3.2%) and the period 1948-1957 (3.6%) were high, under the influence of special and transitory conditions. We know that during the decade preceding the Second World War (1929-1939), ther was virtually no growth in industrial production in the USA During the economic crisis of 1929-1933 the volume of production in the USA dropped approximately by half. The crisis was supplanted by a profound depression, and as early as 1937 a new crisis arose in the course of which industrial production again underwent a sharp decline. Under the conditions of the Second World War, the volume of production in the USA doubled in a brief period (1939-1943). This leap in American industry during the four wa years had its effect upon the comparatively high rates of growth in industrial production during the entire period under study (1929-1957). However it would be wrong to as sume that the average annual rates of growth developed in 1929-1957 under the influence of these exceptional circum stances will be retained in the future.

The years 1939-1943 saw the creation of a great army, navy and air force in the United States. The militarizatio of the economy in that period made for an increase in the volume of production, and this directly involved hypertrop growth of Department I of social production. The USA wa far from the theaters of military action, and its territory was not subject to invasion and air attack by the enemy. the same time, it took a very small part in the military operations, and its field army was relatively small. Simultaneously, very favorable conditions for the sale of American military, industrial and farm products in exter markets developed. The markets not only of the enemies the USA but of its allies fell within the orbit of American expansion, and many of its allies themselves became a major market for the American economy.

In connection with the fact that millions of unemployed were drafted into the army and involved in war production, and the wage fund rose due to increase in employment and the lengthening of the work week, effective demand in the internal market of the USA increased. The volume of capital investments in the American economy rose, and hitherto idle productive capacities found utilization. Moreover, the United States experienced no shortage of raw materials as, in the first place, the countries of Latin America and Africa and other raw material producers, were cut off from European consumers and their produce went to the United States in a broad current and, secondly, the United States proved capable quite rapidly of eliminating the shortage of various types of raw materials (rubber, for example) by organizing the production of synthetics.

It is quite obvious that the totality of all these exceptional political, economic and military conditions, permitting the United States to double its production in a four year period, cannot be repeated in the future. From this it follows that a mechanical application to the coming period of the mean rates of development of American industry for 1929-1957 is methodologically unjustified.

If we consider conditions of reproduction not related to the specific circumstances of 1939-1943, it appears that the rate of increase in industrial production in the USA is considerably lower than 3.2% per year. Thus, if we take as our starting point the peak attained in 1943, the average annual rate from then through 1957 is 0.9%; from 1953 to 1956 it is 2.2%, and from 1953 to 1957 1.6%. The pronounced rise in the level of production attained by the USA in 1939-1943 has to a significant degree become a "brake" upon the further rapid rise in industrial production in that country. Analysis of the data adduced shows that it is not possible to apply to the future the low average annual increase in American production in 1943-1957, 0.9%, inasmuch as it is not characteristic of the present state of the economy of the USA. Nor would it be proper to take the average annual rate for 1948-1957 as the base for determination of the rates of growth of industrial production in the USA in the future. The level of production of the USA in 1948 was lower than in 1943. But in 1948 the structure of production existing in the United States was different than that prior to the war, as it had developed on the basis of wartime conditions. The productive capacities created in the war and postwar years attained such dimensions in 1948 as to make it possible for the United States in a comparatively short period (by 1953) to surpass the level of the wartime maximum (1943).

It is proper to assume that, over a long term (1958-1975), industrial production in the USA will rise at a rate somewhere between the rate of growth in 1953-1956 and that of 1953-1957, or in other words by 1.6-2.2% per year. The indices of development of American industry during these years may be taken as a base for determination of the rate of growth of American industry in the next 15 to 20 years because the present shape of the American economy, which will be retained into the near future, came into being during that period.

The years chosen by us for purposes of comparison are years that have in general been favorable to the economy of the USA. Although in 1954 production dropped in the United States, that period as a whole represented a phase of cyclic rise both in the USA and in the world capitalist economy as a whole. The correction introduced by the transitory crisis of 1954 into the rates of development of industrial production in the USA for 1953-1957 serves as yet another proof of the fact that these rates may be expected to continue into the future.

Also to be taken into consideration is the fact that rates of industrial development in 1950-1957 in the USA were accelerated by the high level of governmental expenditures, the large scale of housing construction and major investments in basic capital. The table adduced below shows that the increase in expenditures in these fields was considerably greater than the increase in industrial production in the USA.

The action of these factors, influencing the acceleration of economic development in the USA, is characteristic of virtually the entire postwar period. But so significant an expenditure in these fields is hardly probable in the future. On the other hand it may be assumed that in the future it will have an inhibiting effect upon the development of American industry.

Thus it may be held that the rates of growth of American industry over a long period may, in the final analysis, be those of 1953-1957. We speak of rates in the final analysis inasmuch as there was a decline in industrial production in the USA from autumn, 1957 to April, 1958. The crisis actually caused the volume of American production to drop by almost 15% during some months, and there was a sharp rise in unemployment and a significant drop in real wages. And although since May, 1958, production in the USA has shown either a slow rise at times or stagnation at others, it is difficult to say when it will reach the high point of December, 1956.

American capitalist economists and statisticians have devoted no little time and effort recently to determining the rate of increase in American industrial production during the next 10 to 20 years or more. Calculations of this type may, for example, be found in the document of the Joint Committee of Congress on the Economic Report, published under the title Potential Economic Growth of the USA During the Next Decade (the Ainsley Report, as it is known). According to the estimate in this document, the gross national product of the USA should increase by 3.4% per year, on the average, in 1956-1965. Analysis shows such an estimate to be unrealistic. This is most evident upon examination of the situation as regards capital investments. In the view of the economists of the Joint Congressional Committee on the Economic Report, investments in fixed capital should constitute sixty billion dollars in 1956 (in 1953 prices), or 58% more than in 1953. This hypothesis is hardly credible. During an eight-year period (1948-1956, when conditions for investment were most favorable in the USA) the volume of capital investments rose by 25.3% (from 33.7 to 42.4 billion dollars). One wonders whether

	1937	1953	1955	1956	% rise over 1937		
					1953	1955	1956
Industrial production (100 = 1947-1949 index)	61	134	139	143	+120	+128	+134
Government expenditures (billion dollars, 1947 prices)	19.7	69.6	—	—	+253	—	—
Private housing construction (billion dollars, 1947)	3.9	—	12.9	—	—	+231	—
Investments in fixed capital (billion dollars, 1947)	12.9	—	—	32.7	—	—	+154

there really is a serious basis for so optimistic a conclusion relative to prospects of capital investments as that arrived at by the Ainsley Report? There are no bases for this optimism. In the first place, militarization and a number of other factors no longer stimulate capital investments to the same degree as they used to and in the second place the development of the economic crisis in the USA has already led to a direct reduction in the volume of capital investments.

Nor is there foundation for the prognoses of the Presidential Committee on Raw Materials Policy, known as the Paley Committee. This committee proceeded from the hypothesis that the national product of the USA would rise by 3% per year over a long term of years. Life has refuted many of the hypotheses of the Paley Committee. Thus, for example, the actual volume of capital investments in the USA has proved to be considerably lower than that predicted by the Committee.

The Paley Committee assumed that private internal capital investments would rise continually by about 1.3% per year on the average, and would show a total rise of 40% by 1975. However, the cyclic nature of the motion of capitalist production eliminates the possibility of continuous growth in capital investments. The seven years that have elapsed since 1950 show conclusively that the real capital investments in 1957 were not only significantly below the estimates of the Paley Committee, but were actually no higher than in 1950 (see table below).

Nor did the prophecy of the Paley Committee on the rates of increase in labor productivity in the USA prove justified. According to the hypothesis of this committee, the gross national product of the USA (exclusive of agriculture) was to have risen by 2.5% per year per man-hour. In actuality its increase was considerably slower.

Index of Private Internal Capital Investments in the USA
(1950 = 100)

	1951	1952	1953	1954	1955	1956	1957
Paley Committee data	101.3	102.6	103.9	105.2	106.5	107.9	109.3
Actual data	102.5	89.7	89.4	86.5	104.7	108.8	100.5

Index of Gross US National Product in Man-Hours
(1950 = 100)

	1951	1952	1953	1954	1955	1956	1957
Paley Committee data	102.5	105.0	107.7	110.4	113.0	116.0	119.0
Actual data	102.0	104.7	106.6	108.1	110.5	110.9	112.7

Many real data from production have also proved considerably lower than the estimates of the Paley Committee. This holds for coal output and production of phosphate fertilizers, tin and lead consumption, manufacture of synthetic fiber and plastics. The volume of steel melted and the production of cement, as well as the consumption of copper and zinc, are also somewhat lower than the committee's estimates.

The hypotheses of the Paley Committee proved to be refuted under the conditions of cyclic rise in production. The economic crisis of 1957-1958 threw the US backward in the level of production of these and many other forms of industrial production. Thus, the "correctives" introduced by life into the prognoses of this government committee became even more significant. Periodic crises of overproduction cannot be discounted in determining rates of growth of the capitalist economy for the period ahead. A capitalist count may possess an adequacy of all the factors of production: labor power, equipment, raw materials, fuels, supplementa materials — and nevertheless production may not only fail to grow but may even decline under the effects of the crisis

The problem of the market is suspended over capitalism like the sword of Damocles. This problem is insoluble under the conditions of the capitalist system, inasmuch as tha system is founded on private ownership of the means of production and the exploitation of man by man. Its basic contradiction is the contradiction between the social nature of production and the private form of appropriation of the products of labor. Today the problem of the market has become even more acute. It would of course be incorrect to negate the rise in the absolute capacity of the capitalist market since the war. If this had not occurred, growth of production in the capitalist world would have been impossible. However, despite the absolute expansion of the volum of the capitalist market, there is a constant development in the process of its relative narrowing when compared to the more rapidly rising capabilities of production. This compa tive narrowness of the markets is due to the low living standard of the people, and the limitation and inhibition of the industrial development of the underdeveloped countries by the imperialist powers and the reduction of the territory open to the capitalist market. Expansion of the world capitalist market is also interfered with by the policy of limiting trade with the socialist countries pursued by imperialis circles in the USA.

As previously noted, today and in the near future the combination of conditions that gave rise to the comparatively rapid increase in the production of capitalist industry during the Second World War and in the postwar decade is impossible. A new, third world war, if imperialism succeeds in unleashing it, would be quite different for the United States than the two preceding world wars, as the USA would inevitably become a theater of military action. The economic and defensive capacity of the USSR and the entire socialist camp are today so great, and the revolutionary forces of the working class and of all the forces in the world struggling against imperialism have risen to suc a degree that the imperialists could not win the war. Unde these conditions the American monopolies are no longer capable of counting on the fact that the war will make for growth in production and enrich them further. The war wo not only result in colossal destruction of productive forces with no precedent in history, but would result in the final death of imperialism. Only imperialist idiots who have los all capacity to reason can today think of war as a means o enrichment.

Today, militarization of the economy is also not capable of exercising that stimulating effect upon capitalist production that it exercised when it undertook the extensive construction of new military enterprises, carried out extensi construction of new enterprises, created strategic reserv of raw material, and when parasitic military demand required major capital investments in Department I. Under the conditions of today, militarism does not result in grow of production in the capitalist countries. It is capable of facilitating maintenance of the market level to some degre but, as the most recent events in the economic life of the United States and other capitalist countries have shown, it is not capable of preventing a decline in production. The continuing development of instruments of death requires only a certain modernization of the productive apparatus but not mass replacement of equipment on the scale of society as a whole. And this no longer results in expansion of the capitalist market and consequently in the scale of produc

Approximately the same may be said of the growth in military technology, which previously had the effect of creating high rates of expansion of capital investment and today, under the conditions of completion of the current series of investment in fixed capital, is no longer capable of giving rise to a pronounced increase in production. Moreover, the hypertrophized and swollen production of means of production, which is an inevitable consequence of the militarization of the economy and of technological progress, has led to deepening the disproportions and contradictions of capitalist reproduction. It has intensified the problem of markets and has also intensified inflation, which has in our day become a permanent characteristic of the capitalist economy.

Nor does the relative acceleration in development of productive forces in the weakly-developed countries that have become politically independent open radiant perspective for imperialism. In the first place, it must be stated that the peoples of the East have gone into motion. They will not pause at the level of the anti-imperialist revolution, but will go further along the path of social and economic revolutionary transformations, inasmuch as in the countries that have broken free of the chains of capitalism, the agrarian and social problems have not been solved. However, even within the bounds of the capitalist world economic system, these countries are incapable of being an adequately capacious market for the major imperialist powers. Inasmuch as these countries have not undergone an agrarian revolution, their home markets are expanding with extreme slowness. The low level of development of the productive forces in the underdeveloped countries, the limitation and inhibition by imperialism of the process of industrialization therein, and the pumping of raw material and fuel resources out of these countries, as well as their payment of vast colonial tribute to the imperialists, exchange without receipt of an equivalent — all this presents an obstacle to the creation in the East of a capacious market for the highly-developed capitalist powers. This also predetermines to a considerable degree the lower rates of economic development of the USA and the other major imperialist countries in their competition with the system of socialism.

Thus, analysis shows that if capitalism should even succeed in avoiding a long depression, the rates of expansion of capitalist industry will even then not be higher than those of the past five years. That is why it should be hypothesized that the average annual rate of growth of industrial production in the USA in the nearest future will be 2%, that of England will also be approximately 2%, and that of the Federal Republic of Germany and of France will be 4%. These are the rates at which the industries of these respective countries grew in 1953-1957, when the American economy and the world capitalist economy as a whole took on their present form, a form that will apparently be characteristic for the near future.

By contrast to capitalism, socialism provides for an impetuous rate of increase in production. The control figures for the development of the USSR national economy in 1959-1965 envisage maintenance of the high rates of development of the Soviet economy in the future. Gross industrial output will, in 1965, be 80% higher than that in 1958, including a rise of 85-88% in group A and a rise of 62-65% in group B. The average annual increase in industrial production in the forthcoming seven years will be about 135 billion rubles as against 90 billion rubles during the previous seven-year period. Under the Seven Year Plan, the average annual rise in gross production for industry as a whole will be approximately 8.6%.

Agricultural production will also expand rapidly in the USSR. During the next seven years, the volume of gross production of agriculture as a whole will increase by about 70%. In 1965 the production of the most important agricultural products in the USSR will, in toto, and per head of population, exceed the present level in the USA. The basis for the attainment of this objective will be the successes of socialist agriculture during the past five years. While agricultural production in the USSR in 1954-1957 has risen annually by 7.1% on the average, in the USA it rose by only 1.1% per year during the same period. In 1959-1965 the average annual rise in the gross production of agriculture in the USSR will be not less than 7.8%.

The rates of development of industrial and agricultural production in the USSR projected for the coming seven years refute the assertions of capitalist soothsayers that the Soviet Union, having attained a high level of industrial maturity will not be able, in the very near future, to avoid a dropping and damping curve of industrial development. Assertions to this effect reflect the effort of the ideologists of capitalism to pass off their wishes for reality, to slander the socialist economic system, to denigrate its advantages in the competition with capitalism.

In the capitalist press one may encounter assertions to the effect that the Soviet Union is an “industrially immature” country and that its economy is therefore incapable of developing at a rapid pace. Assertions along these lines testify only to the poverty of the economists of capitalism. Even prior to the Second World War, the USSR overtook such industrially developed countries as England, Germany and France in volume of production. Today our country is producing more industrial output than did the USA prior to the Second World War. And did anyone regard the USA as an industrially immature country prior to that war?

“Declining rates” of growth in production are not by any means the result of the degree of industrial development of a given country. The rates of economic development of a country depend upon its social and economic structure. The production relations of capitalism have long since become fetters upon the development of the productive forces, and it is this that determines the low rate of growth of industry in the capitalist countries. Contrariwise, socialism creates all the conditions necessary for progressive development of the productive forces and for high rates of growth in production.

This is coming to be understood by the more sober economists of capitalism. The historical experience of rapid economic development in the USSR, the successful fulfillment and overfulfillment of all the Five-Year Plans have reduced to dust the fabrications about the lack of reality of our plans and outlined rates of economic development. Today there are few people in the world who doubt the realism of the objectives of the Seven Year Plan. Thus, the American capitalist magazine Newsweek, noting that “the challenge thrown down to us is considerably more dangerous than we would like to think,” writes that in the economic competition with the USA, the Soviet Union is “closing the gap most rapidly” and that Soviet rates of growth in production considerably surpass the American.

The Soviet Union has now entered a qualitatively new stage in the competition with capitalism. Today it surpasses the United States and other capitalist countries not only in rate of growth but in the absolute size of the rise in production of a number of the most important types of industrial products. For a long time, despite its substantially lower rates of growth of production, the USA surpassed the USSR in this respect. This was a result of the fact that the development of Soviet industry had begun at a very low level. In view of the significant difference in the volume of industrial output in the USA and USSR, a 2-3% rise in production by American industry then represented a significantly greater volume of production than a 10-15% annual rise in industrial production in the USSR. Now the situation has undergone a fundamental change. The level attained by Soviet industry is today high enough that its rapid rates of development result in an absolute growth of production of iron ore, coal, petroleum, pig iron, steel and cement significantly greater than that of the USA. In the forthcoming seven year period, the absolute increase in production of oil will exceed, and the recovery and production of gas will be equal to the respective American indices.

The average annual absolute rise in industrial output in the USSR as a whole for the period 1953-1957 was approximately 2.5 times as great as in the USA. This Soviet advantage will increase in the coming seven-year period, as even today the volume of industrial production manufactured in our country is more than half the industrial production of the USA, and each year, each per cent of rise in Soviet production will represent a greater physical volume of production.

As the result of fulfillment of the seven-year plan, the Soviet Union will make a gigantic step forward along the path of eliminating the gap in volume of production between the USA and USSR. In 1958 the industrial production of the USSR was 53-55% of the level of industrial production of the USA. Inasmuch as, during the seven-year period, the gross production of Soviet industry will grow by about 80%, the volume of industrial production of the USSR will in 1965 constitute 95-99% of the present level of industrial production in the USA.

If the level of production in the USA in 1957 be taken as 100, the level of production of the most important items of industrial production in the USSR in 1965 will be:

Electric power	70- 73
Coal	128-130
Petroleum	65- 68
Gas recovery and production	50
Iron ore	139-149
Pig iron	90- 97
Steel	84- 89
Cement	151-163
Woolens	187
Leather footwear	87

If the prospects for development of the economy of the USA be taken into consideration, the Soviet Union will in the two or three years subsequent to 1965 leave the USA behind in absolute industrial production and will lead the world in this respect. The superiority of the USSR in rates of growth of production creates a real foundation for overtaking and surpassing production in the USA per head of population within approximately five years after 1965.

The result of fulfillment of the Seven Year Plan will be a considerable rise in the Soviet share of world industrial production. In 1917 our country produced only 3% of the world's industrial production; in 1937 the figure had risen to 10%, and in 1958 to almost 20%. These figures show that the basic advantages of socialism are resulting in a constant growth of the share of the USSR in world production. As far as the USA is concerned, it will be pushed farther out of the picture, and its position in world production will become increasingly weaker. In addition, the share of the entire world system of socialism will show a steady rise, and the share of capitalism in world production of industrial output will decrease.

These changes in the relationship of forces between socialism and capitalism have and will have enormous significance for the future fate of mankind. The reinforcement of the economic might of the USSR, reflected in the continuous growth of its share in world production, is a material factor in favor of the strengthening of world peace and in curbing the efforts of the imperialists to unleash a new war. The rising economic might of the USSR will become a powerful material source for the granting of disinterested assistance to the underdeveloped countries in their winning of economic independence from imperialism, in the raising of their productive forces and in elevating the living standard of the peoples. Thus, the economic progress of the USSR is proceeding and will proceed further in the direction of furthering the welfare of all mankind.

The objective of overtaking and surpassing the most advanced capitalist countries in the economic sense presupposes the creation in our country of a level of productive forces such as to permit attainment of a scale of production and consumption of material goods per head of population greater than under capitalism. The indices of production per head of population reflect the level of development of the forces of production and the degree to which they are utilized by society, as well as the level of productivity attained by social labor.

One of the fundamental advantages of socialism over capitalism lies in the fact that the development of the socialist economy is well-rounded and characterized by a general forward motion in which all branches move upward without deviation. This feature of socialist reproduction is conditioned by the planned development of the national economy under the conditions of socialism. But this, of course, does not mean that under socialism all branches of the economy have to develop at identical rates. Major changes are continually occurring in the structure of the socialist economy The first-priority and more rapid development of production of the means of production is a law of expanded socialist reproduction that must not be forgotten. The Marxist-Leninist teaching on the preferential growth of heavy indus underlies the seven-year plan. In the seven years ahead, the fastest rates of development will be those of the key an decisive branches of industry, upon which the upsurge of th entire socialist economy rests. Thus, output of the chemical industry will increase almost 3-fold in the seven years that of electric power by a factor of 2 to 2.2, that of petroleum by double and more, that of machinery manufacture and metalworking by almost double, etc.

In determining the nature and rates of development of various branches of industry the following question arises: does the solution of the problem of overtaking and surpassing the USA and other highly-developed capitalist countri in output per head of population mean that our country has to copy their structure of production and exceed their production indices in all fields? By no means. Mechanical comparison of the data of production per head of populatio in the USSR, on the one hand, and in the USA and the most developed countries of Western Europe on the other canno yield the desired effect.

The structure of production in various countries and the need for material goods created thereby are determined in many respects by the nature of the social order, and als by the level of development of the productive forces, of science and technology, historical and national peculiariti traditions, natural conditions, the geographic position of th country, its economic relations with other countries and it place in the international division of labor. Consequently, in our country it is impossible mechanically to reproduce structure of the American economy, the more so with the disproportions that characterize it. In developing the material and technological basis for communism, it is neces to proceed from the structure of the socialist economy developed in the USSR and from the further progressive tendencies to change therein, from the discovery of the most correct, practical and rational proportions in the national economy (between Departments I and II, between industry and agriculture, between accumulation and consumption), making for a more rapid advance to communism in our country.

It would be erroneous to contend that the Soviet Union has to exceed the exceptionally high indices of production per head of population that have, in view of specific conditions, developed in one or another land of the capitalist world with a one-sided development of the economy. However, the assertions by some ideologists of capitalism that the USSR desires to overtake the USA in the production only of certain types of products, are completely lacking in foundation. In reality, the Soviet Union pursues the objective of overtaking and surpassing the USA and other highly-developed capitalist states in the production per head of population of all the most important and decisive types of products of industry and agriculture, representing the skeleton of a modern economy, its material foundation, and, all other circumstances being equal, determining the living standard of the masses of the people.

It must be borne in mind that the volume of production of the most important types of industrial and agricultural products per head of population also describes to a certain degree the level of consumption per head, including productive consumption, although these two indices usually do not coincide, as the result of the effects of a number of factors, including foreign trade. In the coming seven years our country will advance further along the path of realizing its advantage over capitalist countries in the sphere of consumption of the products produced. Under socialism, unlike capitalism, growth of productive forces means not only an increase in material possibilities for raising the living standard of the population, but a real rise in personal consumption and in the living standard of the people.

The most all-inclusive criterion for evaluation of the course and results of the economic competition between the two systems is the national income per head of population. When the Soviet Union overtakes the major capitalist countries of Europe and the USA in production of national income per head of population it will be in a position to attain a level of consumption of the most important types of products that will exceed the level attained by highly-developed capitalist countries. Solution of the main economic task of the USSR will result in a sharp jump in the material and cultural life of the peoples of our country.

Living standard is the degree of fulfillment of the material and spiritual requirements of man, including the need for food, clothing, footwear and other mass consumer goods, housing, education, medical services, the right to work, to leisure and that of developing all one's capacities. Inasmuch as the objective of socialist production differs in principle from that of capitalist production, there is a fundamental difference in the distribution of the national income in socialist and capitalist countries. As distinct from capitalism, under socialism an increase in the national income means a real rise in the well-being of the people. From this it follows that solution of the major economic problem of the USSR is a most important step in the direction of creating an abundance of consumer goods in our country.

In view of the fact that under capitalism the bulk of the national income is absorbed by various parasitic layers of society, it would be wrong mechanically to compare the mean level of consumption per head of population in the USSR with the mean level of consumption per head of population in the capitalist countries. The elimination, under the conditions of socialism, of parasitic classes, makes it possible, with the same level of production of consumer goods as in capitalist countries, to satisfy the needs of the entire population to a much better degree.

The seven-year plan for the development of the national economy of the USSR clearly reveals the concern of the Communist Party and the Soviet government for a constant rise in the living standard of the people. The national income, which in our country is truly the people's income, will in 1965 rise to 62-65% over its 1958 level. On the basis of the rise in national income there will occur a further considerable rise in consumption by the people. During the seven-year period, the fund of goods for consumption will rise by 60-63%. The real incomes of the workers and office personnel per worker will rise by 40% on the average. The real incomes of collective farmers will rise by approximately the same amount.

The general increase in the wages of the workers and office workers will be paralleled by continuation of the party line of raising the wages of the low- and medium-paid groups of workers toward the levels of the highly-paid groups. The gap between pay levels will contract continually on the basis of a general rise in the well-being of the Soviet people. A virtual doubling of the wages of low-paid workers and office personnel and a rise in the wages of other groups of workers leads to a rise in consumption in the country. In connection with the expansion of production and the rise in the incomes of the population, the volume of retail commerce in government and cooperative stores will rise by 57-62% during the seven years (in comparable prices). The need of the populace for foodstuffs will be satisfied to the full, and the diet will improve considerably. The population will have its full need for fabrics, clothing and footwear met. The sale of household, cultural and productive commodities will rise.

The measures outlined in the control figures for 1959-1965 will assure a further improvement in the conditions of life. In 1960 the shift to a seven-hour workday will be completed, while the workers of the most important coal and ore mining skills engaged underground will be on a six-hour day. In 1962 the shift of all workers and office workers on the 7-hour day to a 40-hour work week will be completed. Starting in 1964, it is planned to proceed to gradually shift workers and office personnel to a 30- or 35-hour workweek with two days off. These measures will be completed by 1966-1968. Under socialism, shifting to a shorter work day does not result in reduction in pay. On the contrary, in the long run the reduction of the work day will be accompanied by a raising of wages. The foundation for this will be established by the rapid rise in labor productivity.

The transformation of the Soviet Union into the country with the world's highest living standard will be of colossal significance. The advantages of socialism over capitalism will become obvious to all the peoples of the earth without exception. This will have an even greater influence in revolutionizing the masses of East and West, will deliver a most powerful blow against reformism and revisionism, and will further increase the magnetic force of the ideas of Marxism-Leninism.

The attainment in the Soviet Union of a productivity of social labor higher than that in the United States will be of decisive significance to the victory of socialism in the competition with capitalism. The level of labor productivity is the most important index of the degree of economic development.

In the USSR the production of industrial output per head of population is growing more rapidly than the productivity of labor. This is a natural consequence of the increase in the proportion of the gainfully employed in material production to the total population of the country. In the struggle for solution of the main economic task, the Soviet Union will continue to make use of its advantage over the countries of capitalism in the utilization of the labor force and the training of forces of skilled workers and specialists. Even before it overcomes its lag behind the USA in the productivity of labor, our country will be able to attain a higher percentage of the gainfully employed in material production than in the USA. Other conditions being equal, this makes it possible to attain relatively better indices in production of goods per head of population than in labor productivity.

But socialism, as a social system superior to capitalism, will have to demonstrate its superiority in the field of economy of social labor. We have no few accomplishments to our credit in this respect. In 1958 the labor productivity of workers in industry in the USSR was about 10 times as high as in 1913, with a shorter workday, while in the USA in that period labor productivity rose only by a factor of 2.3. This means that the rate of increase in labor productivity in the Soviet Union is more than 4 times as great as in the USA.

Socialism also creates conditions for increasing labor productivity that are unattainable under capitalism. The rapid growth of labor productivity in the USSR is determined by the planned nature of the socialist economy, the absence of the problem of sale which is characteristic of capitalism, the elimination of conditions inhibiting the introduction of new technology, and rational territorial distribution of the forces of production. A most important factor in the undeviating rise in labor productivity under the conditions of socialism is the conscious attitude of the members of socialist society to labor, as they work not for exploiters but for themselves, for their society.

In the forthcoming seven-year plan, the productivity of labor in USSR industry per worker will rise by 45-50%, and with due allowance for the reduction in the working day, it will show even further growth. In construction, labor productivity will rise by 60-65% in 1959-1965, in railway transport by 34-37%, and in agriculture by 50-100%.

As we know, the level of labor productivity differs in the various capitalist countries. Labor productivity in the USA is approximately 2-3 times as high as in the lands of Western Europe. There is 2 to 3 times as much fixed capital per worker in the USA as in the capitalist countries of Europe, and the power supply per worker is 3 times as high in America as in Western Europe.

Labor productivity is higher in the Soviet Union than in England and France. Our country possesses everything necessary to overtake the USA in labor productivity. In recent years the rates of growth in labor productivity have been 6-8% per year in the USSR and 1.2-2.5% in the USA. In the future, rates of rise in labor productivity will contin to be higher than in the USA. In the forthcoming seven-yea plan, new technology and chemical means will be introduce on a substantially larger scale than before, and all-round mechanization and automation of the processes of productio will be expanded by every possible means. Heavy physical labor will be increasingly replaced by control by machines and supervision of their work. The rapid developments in science and the training of highly-skilled experts will crea all the conditions necessary for accelerated rise in labor productivity in our country.

The magnificent objectives of the seven-year plan testify to the insuperable vital force of socialism. The triumphs of the upbuilding of communism in the USSR will make for a substantial acceleration of the development of humanity along the path of peace and social progress. The forces of reaction will not be able to stop the forward motion. The peoples will make the proper choice. They will move forward along the highroad marked by Marxism-Leninism and first laid down by the Soviet Union.

*N. Nekrasov:**

Establishing New Large-Scale Industrial Regions in the East

Our country is entering a new stage in the building of the material and engineering basis of communism. The accelerated development of the national economy, and in the first place of Department I of social production will in the coming seven years rest upon profound qualitative changes in the country's economy. Vast new problems are posed in the field of correct distribution of productive forces over the territory of the Soviet Union for the most efficient development of the national economy and to assure an upsurge in the economies of all the constituent republics. An important direction in the seven-year plan is represented by accelerated development of the economies of the Eastern districts of the country. Over 40% of the total volume of capital investments during the seven-year period will be in the Eastern districts, including the Urals, Siberia, the Far East, Kazakhstan and Central Asia.

The discovery, particularly in recent years, of tremendous natural resources of high-quality industrial raw materials, economically desirable for exploitation, in Kazakhstan (Bolshoy Turgai district, etc.), Siberia and the Far East, and in the Central Asian republics makes possible a new approach to the problem of rational spacing of the industrial centers of the Soviet Union. Planning of the integrated development of the economy of large economic geographic districts with rational organization of inter-district economic ties will create the foundation for the most proper territorial organization of the USSR national economy.

The 20th Congress of the Communist Party of the Soviet Union advanced the objective of developing a long-range plan for a more extended term of years. The speech by Comrade N. S. Khrushchev at the Session of the Supreme Soviet of the USSR devoted to the 40th anniversary of the Great October reflected the major directions and objectives of the long-range plan for the next 15 years. The control figures for the development of the national economy for 1959-1965 represent a component part of this perspective plan.

A long period is required to create major centers of production, particularly in the newly opened eastern districts. The industrial mastery, for example, of such large economic geographic districts as the Far East and Eastern Siberia will only begin during the coming seven-year plan: This period will see the foundations laid for the development of new major bases of production with the object of the industrial utilization of the exceedingly rich natural resources of these districts. After 1965 the rates of industrial development of the districts of Eastern Siberia and the Far East will increase markedly. During the period of realization of the long-range plan for the development of the national economy during the next 15 years there will be developed new large industrial centers, and this will effect a fundamental change in the inter-district economic ties of Siberia and the Far East and the overall territorial organization of the national economy.

In examining the scientific and practical problems of distribution of the productive forces, particularly in the distant eastern districts, it is necessary to take into consideration the perspectives of development of the national economy for more extended periods.

The theoretical propositions developed by V. I. Lenin, and the practice of socialist construction have determined the major directions in the distribution of material production among the large economic geographic districts of the country.

The seven-year plan envisages the involvement in economic circulation of those natural resources that are richest in content and most profitable to exploit, particularly in the eastern districts of the country, and more complete utilization of the labor supply in accordance with the accumulated experience of production and the presence of productive resources in the various districts and in all the republics. In distributing the productive forces in the country, account is taken of the need for bringing industry even closer to the sources of raw material and power, and of encouraging in every way the development of specialization and coordination in industry, the creation of new large integrated establishments, and the rational utilization of all types of transport. The complex development of the economy both in the republics and of the large economic geographic districts is directed not only to the most rational utilization of natural resources but to the improvement of interdistrict economic ties. This will prevent the development of autarchic economies in contradiction to the principles of organization of the socialist economy.

Technological progress, which lays new paths in the industrial development of the Soviet Union, exercises an enormous influence as well upon the distribution of socialist production. The proper utilization of new technological processes, the introduction of more advanced engineering equipment makes possible the speedy drawing into the economy of the rich natural resources of the country, increasing the economic efficiency of production, the creation of large industrial centers on a new technical basis, and changes in inter-district production ties. All this, taken together, will lead to maximum economy in social labor in the country as a whole, and growth in its productivity.

A particularly great influence upon the distribution of the productive forces in the forthcoming seven years will be exercised by the following qualitative changes in the structure of production: a) significant increase in the production of ferrous and nonferrous metals; b) accelerated growth in the chemical industry and particularly in the production of synthetics; c) change in the structure of the fuel balance by priority development in the recovery and production of the most economical types of fuel — oil and gas; and the rapid development of electrification in all branches of the national economy by preferential construction of large fuel-powered power plants.

The building of new main lines for transport (railways, highways, waterways, pipelines) and their technical reconstruction will also create favorable conditions for the distribution of production.

Lenin's propositions on the rational distribution of industry from the viewpoint of availability of raw material and reduction to a minimum of losses of labor between treatment of raw materials and all the subsequent stages of processing semi-finished goods, clear up to the production of the finished product, have become a most important practical guide to the solution of the problems of the development of socialist production.

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The control figures of the seven-year plan envisage the further industrialization of the eastern portions of the country. Improvement in the distribution of the country's productive forces will be determined by: a) the building of a third great base of the iron and steel industry on the basis of the large new deposits of iron ore found in recent years in Siberia and Kazakhstan; b) a significant increase in nonferrous metallurgy on the basis of the rich deposits of ores in Kazakhstan, Central Asia, the Urals and the Trans-Baikal; c) a major rise in power production in Siberia by means of the cheap coals of new deposits; d) high rates of development of the petroleum and gas industries in the districts between the Volga and the Ural, and the creation of a new center of the gas industry in Uzbekistan; e) a speeded growth of the chemical industry, which will become one of the leading branches of the national economy in the east and, in particular, in the republics of Central Asia; and f) rapid rates of development of lumbering in the forested districts of Siberia and the Far East.

In connection with the broad utilization of rich natural resources for industrial processing in the districts where high concentrations of such resources exist, there will be a decrease in the unit capital and operating outlays per unit output, a sharp rise in the productivity of social labor, and a considerable reduction in the cost of industrial production.

The specific economic factors determining the formation of new, major bases of industry, are the rational utilization of highly-concentrated energy sources and the all-round expansion of the production of industrial materials, particularly of new types. Technical progress in machine-building will be facilitated by the introduction of the latest in technology, and the most advanced equipment into the production of power and industrial materials.

At the present level of development of technology in the national economy, interrelations and close contact between power production and the production of industrial materials are of particular engineering and economic significance. This interrelation is manifested with particular force under conditions of high and continually rising concentration of industrial production, which is determined by the very nature of the socialist economy and constitutes its very essence.

Socialist industrialization in our country has resulted in fundamental changes in the volume of industrial production, its concentration, and the rates of growth of large-scale industry. A striking example of the high concentration of Soviet industry is the development of electric power production and the iron and steel industries — the most important branches of industry.

In pre-revolutionary Russia, the Moscow electric power plant, of 57,000 kw capacity, was regarded as the very largest. The power of the Volga Lenin Hydroelectric Plant that went into operation in 1958 is 2,310,000 kw, and the power of the Bratsk hydroelectric station under construction is 3,600,000 kw. In 1957, power plants of 100,000 kw capacity or more, produced 134 billion kwh of electric power, or 63.9% of the total output in the USSR. In the immediate future, construction of fuel-powered power plants of 1.2-2.4 million kw capacity is envisaged. This will significantly reduce capital investments per unit capacity, and the cost of electric power will be less by a factor of 1.5-2 than at the fuel-powered plants now in operation, of 300,000-400,000 kw capacity.

In 1957, 12 iron and steel mills having a capacity of over 1,000,000 tons each smelted 28,700,000 tons of pig iron, or 77.6% of the total output. In 1957 four plants — the Magnitogorsk, Kuznetsk, and Nizhny Tagil integrated operations, and the Zaporozhstal mill — produced about 40% of the total pig iron smelted in the USSR.

The high level and rapid rates of development of industrial production in the USSR require a corresponding growth in the output of industrial raw materials. In 1957 production of iron ore was 84,200,000 tons, of coal 463,000,000, of petroleum 98,300,000, of gas 20.2 billion cubic meters. The level of output in the USSR within about 15 years will be 250-300,000,000 tons of iron ore, 650-750,000,000 tons of coal, 350-400,000,000 of petroleum, and 270-320 billion cubic meters of gas.

The USSR is one of the world's richest countries in natural resources. During the years of Soviet power, a powerful base for the production of mineral raw materials has been created, guaranteeing that production on a large scale will continue for a long period. According to data for the start of 1956, the USSR possessed 41% of the world's prospected resources of iron ore, 88% of the world's prospected resources of manganese ores, 54% of the world supply of potassium salts, almost 1/3 of the world's prospected supplies of phosphate materials, 60% of the world supplies of peat, 57% of the world's geological supplies of coal (in accordance with the data for 1957) and enormous supplies of petroleum. At the present time, the Soviet Unio occupies first place in the world in prospected supplies of iron and manganese ores, copper, lead, zinc, nickel, bauxit tungsten, mercury, sulfur, potassium salts, phosphate salts and also in total resources of coal, peat and timber. The forested area is 722 million hectares, or approximately one-third the territory of the country. Forest plantings in the government timber lands come to 75,000,000,000 cubic meter

Further, and even higher concentration of production within the main branches of industry urgently requires that these operations be brought closer to the districts rich in raw materials and power resources. Large scale industria processing of raw materials will make possible a broad utilization of modern engineering and technology, and of ne and progressive forms of organization of production.

Under conditions of highly-concentrated production, the greatest economic efficiency is attainable by means of: a) complete, integrated mechanization and automation of production; b) new technologies based on the specific features of particular industrial raw materials and permitting integrated use of all their components; and c) rational forms of combination of production processes, and proper specialization of production.

Modern methods of processing industrial raw materials require high expenditures of electric power and fuel. Onl abundance and cheapness of power can assure economicall efficient industrial production with minimum expenditures of social labor. Expenditures upon electric power in fields pr essing new types of industrial products are particularly grea

According to available data, electric power outlays per ton of metal are approximately (in thousands of kwh)

Magnesium	21- 24
Aluminum	18- 22
Titanium (with consideration of magnesium and chlorine obtained)	45- 50
Zirconium metals	100-120
Hafnium	160-170
Lithium	over 60

Unit consumption of electric power per tons of synthetic materials is as follows (in thousands of kwh):

Acetylene synthetic rubber (including resultant intermediates)	150
Synthetic fibers:	
Acetate silk (including resultant intermediates)	20
Viscose rayon	5-7
Artificial leather	3.5-4
Cellophane	3
Electrothermic phosphorus	12-15
Calcium carbide	2.5-3.3

Due to the high consumption of fuel and electric power, the share thereof in cost in the production of new metals and alloys and of many synthetics is 25-30% and more. Thus, the economic efficiency of industrial production of the new metals and materials is dependent very largely upon the abundance of cheapness of electric power. Large enterprises that are heavy consumers of energy should generally be located in the immediate vicinity of, or not far from, sources of highly-concentrated energy (powerful fuel-powered stations and hydroelectric stations, centers of the petroleum and gas industries, coal-mining regions).

Modern technology makes possible a fundamental change in the utilization of industrial raw material. Virtually all types of mineral raw materials represent a complex of substances of value in production. The problem is to effect a maximum extraction and proper utilization of the individual components of the raw material. High concentration of industry and the new technologies of production lead to an expansion of the range of products extracted from an industrial raw material. Proper orientation in the development of new technologies requires consideration of the fact that virtually every source of useful minerals presents different conditions of extraction and components of varying composition.

Of particular significance to the national economy is complex utilization of all types of fuel resources (petroleum and gas in the first instance), ores of ferrous and nonferrous metals, raw material for the aluminum, titanium and cement industries, for the production of mineral fertilizers, etc. As technologies and the concentration of production are improved, an expansion occurs in the complex of substances extracted, and their economic value for the national economy changes. Modern methods of chemical technology open broad perspectives for the complex utilization of the very rich raw material resources of the USSR.

A pronounced rise in the share of petroleum and natural gas, which are the cheapest power sources, in the fuel balance of the country, creates favorable conditions for the development not only of the districts where these types of resources are found, but also of many other economic districts of the country. Modern pipeline transportation makes possible transmission of natural gas and petroleum over long distances. Thus, the natural gas of Bukhara is becoming a most important form of energy for the industries of the Ural, Bashkirian oil is being delivered by pipeline to the refinery at Omsk, and in the future it will go even farther east. Thus, modern engineering permits not only the most productive and economically efficient utilization of natural resources, but large-scale inter-district exchange of resources of raw materials and power, and of industrial production.

Priority construction of large thermal power plants is directly related to the accelerated development of strip mining of lignites and coals on a large scale. Only very cheap coals, recovered by strip mining, are capable of yielding cheap power when utilized at large fuel-powered power plants. This opens new perspectives for the coal areas possessing large reserves of coals at minimum depths and favorable conditions for exploitation thereof, and reduces the percentage of coal extracted from mines. In the years to come, a comparable change will occur in the regional distribution of coal recovery. New technical and economic problems will appear. Specifically, it is necessary to develop high-capacity transmission of electricity and, as a first priority, to provide the industry of the Urals with a flow of power from the Siberian plants, thus connecting the power system of the European portion of the USSR with the power system of Central Siberia.

A characteristic feature of the socialist economy is the planned creation, in the most important economic districts of the country, of large-scale centers of industry consisting of integrated industrial enterprises in different fields of production. During the very first Five Year Plan, complexes of this type were established in the Ural and Kuzbass, with integrated industrial enterprises in heavy industry, which were then successfully expanded in subsequent years. A large center of production was developed before the war around the Dnieper hydroelectric plant. A new, large industrial center is being established on the basis of extensive utilization of the power of the Lenin Hydroelectric Plant at Kuibyshev, and a similar center is to be established to utilize the power of the Stalingrad Hydroelectric Plant. A new and powerful industrial center for recovery and processing of the very rich natural resources of Kustanai Oblast is being erected in the steppes of Bolshoy Turgai, Kazakhstan. The foundations for the development of a number of new industrial centers in Eastern Siberia have also been established.

Thus, industrial enterprises are being located chiefly in "bunches," in the form of major industrial complexes, and this creates favorable economic and technical conditions for the exploitation thereof. Later, particularly with the expansion of industrialization in the eastern districts of Siberia, the principle of erection of major centers of production will be still further developed. The gradual inclusion of new centers of industry in the sphere of the national economy will make possible, at each stage of the upbuilding of communism, perfection of the system of large-scale basis of industry coming into being in our country.

One of the most important economic problems, demanding profound and all-round investigation, is the further elevation of the economic efficiency of all branches of our national economy. The cost of industrial production must be as low as possible, or in other words this output must be produced with minimal expenditures of social labor. At the same time, the economic efficiency of capital investments in the national economy, and labor productivity must be as high as possible. The complex of industrial enterprises created at one or another center of industry, will facilitate an increase in the economic efficiency of individual branches of industry. The essential conditions for this are: a) utilization of modern technology and technical equipment under conditions of highly concentrated production; b) complex utilization of cheap industrial raw materials; c) proper specialization of industrial centers in accordance with the general political and economic problems before the national economy of the country.

The newly-established centers of industry should witness the development not only of the "classical" industries — ferrous and nonferrous metallurgy, machinery manufacture, etc. — but efficient new branches: production of new metals and alloys, of synthetic materials and products thereof, of new forms of mineral fertilizers, etc. Under these conditions it is necessary to take into consideration the features specific to the new industries (high outlays of electricity and fuel, complex forms of combination of the latest technological processes, etc.).

Eastern Siberia includes Krasnoyarsk Krai, the Tuva Autonomous Oblast, Irkutsk Oblast, the Buriat ASSR, Chita Oblast and the Yakut ASSR. The territory of Eastern Siberia is 7,220,000 sq. km. Its population (as of April, 1956) is 6,500,000 people, of which 3,000,000 is urban and 3,500,000 rural. Consequently, Eastern Siberia has 1/3 of the territory of the USSR and 3.2% of the population.

The climate of Eastern Siberia is continental, with a long, cold winter having little snow and a short, warm summer, Temperature fluctuations, diurnal and seasonal, are extreme.

Climatically, Eastern Siberia may be divided into three belts. The Arctic belt, with its very cold Arctic tundra and typical Northern tundra includes a considerable portion of the northern territory of Krasnoyarsk Krai and Yakutia. Frosts here reach -50°C and less. The duration of the frost-free period in various northeastern districts of Siberia is from 50 to 70 days per year. The sub-Arctic belt (embracing, roughly, the territories above 62° north) covers a portion of the territory of Krasnoyarsk Krai and Yakutia. They possess greater resources of warmth than the Arctic belt, but grain harvests here are not dependable. The temperate zone, where large-scale agriculture is possible, includes the bulk of the southern half of Eastern Siberia. In addition to zones with cool and moderately cool climates, the southern portion of Eastern Siberia has zones of warm and very warm climates. Many farming districts of Eastern Siberia are characterized by inadequate moisture and seasonal ground frost of long duration.

The natural conditions of Eastern Siberia are favorable to the development of industry and agriculture. However, the vast spaces, and the differences in the natural conditions of the various districts require careful study of problems of priority and correct location of aspects of the economy in Eastern Siberia. Dispersal of centers of industry over a large territory complicates transportation, creates difficulties in terms of skilled personnel, and requires major capital investments when new districts in the mountains and taiga are to be opened. Proper organization of the utilization of the natural resources of Eastern Siberia requires: a) the development of large industrial centers, primarily in districts with the most favorable natural conditions; b) development of a system of major industrial centers with highly concentrated industrial production, and also of new mining and lumbering centers based on proper consideration of the inter-district bonds existing in Siberia and the Far East, and the territorial division of labor between Siberia and other large economic geographic districts of the country; and c) rational distribution of the main transport arteries of Siberia on the basis of consideration of the prospects for development of a system of new, major industrial bases in Eastern Siberia.

As of the present, enormous natural resources have been found to exist in Eastern Siberia. Its geological resources of coal come to 6.8 trillion tons (constituting about 80% of the total coal resources of the USSR). Water power resources in Eastern Siberia technically capable of utilization are estimated at 800 billion kwh and constitute over 45% of the total hydroelectric resources of the country. They exceed the combined water-power resources of the United States, Canada, France and the Federal German Republic.

A large iron-ore base has been prospected in Eastern Siberia, and major new fields have been discovered: the Angara-Ilim, with 900,000,000 tons of prospected reserves the Angara-Pit, with a billion tons of prospected reserves and possibilities of as much as 3 to 5 billion tons, the Argun, with 590,000,000 tons prospected, the Southern Alda with over 600,000,000. Khakassia has iron ore deposits wit reserves exceeding 350,000,000 tons. Considerable resources of iron ore, with high iron content, have been foun in the vicinity of Turukhansk. Rich resources of alumina for aluminum production have been found. Of particular interest are large deposits of Krasnoyarsk nephelines, whi represent a valuable complex ore for the aluminum and other industries. The resources of coal, thick beds of whic extend from the Sayans to Yakutia, and from the Yenisei to Lake Baikal, are inexhaustible. Eastern Siberia also possesses rich deposits of nonferrous, rare and disseminated elements. The very rich auriferous districts of Eastern Siberia have long been known. The major Soviet resources of muscovite and phlogopite are also found in its depths. Here, too, are reef and placer diamond deposits of world significance. A major natural gas find has recently been made in Yakutia at the mouth of the Vilyui. Signs favorabl to oil prospecting have been found in a number of districts of Eastern Siberia. There are virtually limitless possibili for exploitation of the forest wealth of Eastern Siberia, wh constitutes more than half the lumber resources of the Sovi Union. 337.7 million hectares is the area covered with woods in Eastern Siberia, and the total reserves in forest plantings come to 38.7 billion cubic meters. For purposes of comparison it might be remarked that the total forest area in, for example, the USA, is 252.5 million hectares a the supply of wood in forests in use is 14.6 billion cubic meters, while in Canada the total forest acreage is 342 million hectares, of which 130.2 million acres are accessible for lumbering.

This is a brief and incomplete list of the natural resour of Eastern Siberia as presently known. New discoveries a made each year, and data on the various districts of East Siberia are rendered more precise. Apparently, only a s portion of the natural resources of Eastern Siberia has be prospected, inasmuch as only a few districts of this huge territory have been studied.

A characteristic peculiarity of the bulk of the presently known natural resources of Eastern Siberia is its high degree of concentration, the favorable technical and econo conditions for the exploitation of its power and raw mater resources, and the broad possibilities for the complex utilization of its raw materials.

The major coal districts of Eastern Siberia are charac ized by high coal content and the fact that thick beds are found at shallow depths, making possible open strip minin over large areas simultaneously. The Kansk-Achinsk coa district is characterized by favorable conditions of minin geology and very convenient conditions of transport. At the main deposits of this basin, thick beds of coal lie in virtually horizontal position at a depth of 15-30 meters. The overburden to be removed comes to only 1-3 cubic meters per ton of coal. Currently, coal is being mined at the Irsha-Borodino and Nazarovo cuts. Due to the great thickness of the beds (from 14 or 20 to 50 meters) and th insignificant amount of overburden, the technical and economic indices for coal recovery at both these cuts ar exceedingly favorable. The cost of 1 ton of coal at the Irsha-Borodino cut is only 7 rubles, and at the Nazarovo 10 rubles 60 kopeks. The average monthly output of coal per worker on the payroll at the Irsha-Borodino cut is 5 tons, and at Nazarovo 346 tons. The cost per ton of coal the Kansk-Achinsk coal district is even now only a fract of what it is at the open workings in other deposits in our country. Labor productivity in this district is considerably higher than in other coal districts.

With increase in the capacity of the Nazarovo cut to 8,000,000 tons per year, and the first unit of the Irsha-Borodino to 15,000,000 tons, with the second stage of development to bring it to 25,000,000 tons, the cost of coal at the Nazarovo cut will be brought down to 6 rubles and 5 kopeks, and at the Irsha-Borodino cut to 4 rubles 80 kopeks per ton. The average monthly output per worker at the Nazarovo cut is 750 tons, and that at the Irsha-Borodino, 987 tons. The use of high-capacity excavators, and conversion to removal of overburden without transportation thereof assures high cost and technological indices of coal output.

Good prospects for open working of cheap coals in Eastern Siberia exist at the Minusinsk, Irkutsk (Azei and Cheremkhovo) fields, and at the Goose Lake and Kharanor deposits in the Trans-Baikal.

The main bulk of the coals extracted in Eastern Siberia are of local types, requiring utilization primarily in the vicinities where they are mined. Calculations show that the most economical procedure is the use of most of the Eastern Siberian coals to produce electricity. The cost of thermal electric power derived from lignites mined in open cuts is about 2 kopeks per kw, and the unit capital investments for the construction of powerful steam power plants is approximately half that at plants of this type now in operation.

The control figures for the forthcoming seven-year period envisage the construction chiefly of steam plants using cheap coals, natural gas and heavy oil as the major emphasis in the development of power production in the USSR in 1959-1965. Large and powerful steam plants will be established in Eastern Siberia to use cheap coal to make the cheapest electricity.

The rivers of Eastern Siberia, particularly the Angara and Yenisei, present extraordinary possibilities for the derivation of cheap electric power in large amounts at individual plants. The mean average annual potential of these two rivers is 28,000,000 kw. The plan for the utilization of the Angara is to build 6 hydroelectric plants with a total capacity of over 10,000,000 kw to produce about 70,000,000,000 kwh. The first unit in the Angara cascade — the Irkutsk hydro plant — has already gone into operation. The Bratsk plant (3.6 million kw) is under construction, and will go into operation in the next few years. On the list of possible plants are the Ust-Ilim (3,000,000 kw) and the Boguchansk (3,000,000 kw) hydro plants. The preliminary program for utilization of the Yenisei reveals the possibility of creating a Yenisei cascade of hydro plants with a total of 20,000,000 kw capacity and an annual production of more than 130 billion kwh. Progress is under way on the Krasnoyarsk hydroelectric plant to produce over 4,000,000 kw. It is proposed to build hydro plants in the Sayans, on the Yenisei, and at Igarka. One of the largest hydro plants in Eastern Siberia, with minimum unit capital investment and the lowest power cost, is planned for the Sayan gorge on the Upper Yenisei. Unit capital investments for the construction of such hydro plants will be at least 2-3 times less than at the large hydro plants now in operation and building.

Thus, even in the nearest future, Eastern Siberia is capable of providing an enormous amount of cheap electric power. The cost of this electric power will be only one-sixth or one-seventh that at district power plants of our country. The job is to make the most rational utilization of the cheap electric power of Eastern Siberia for the further development of the national economy of the country as a whole. Two ways of utilizing it are proposed: maximum development, in Eastern Siberia, and close to the sources of power, of large industrial operations requiring high quantities of electric power and heat, and transmission of a portion of the electric power to Western Siberia and the Urals. It may be assumed that the major directions for utilization of cheap electric power have to be an increase in the production of the light, nonferrous and rare metals, the development of organic synthetics and particularly the production of synthetic fabrics, a pronounced increase in the use of electricity in industry, agriculture and transportation.

Eastern Siberia presents favorable conditions for establishing production of aluminum, magnesium and titanium. The control figures for the seven year plan envisage the establishment of a powerful aluminum industry in Krasnoyarsk Krai on the basis of the huge resources of nephelines, with by-product production of cheap cement and soda products. The presence of cheap coal in the territory and, in the future, of the cheap electric power of the Krasnoyarsk Hydroelectric Station will make for the production of very cheap aluminum. Other industries utilizing much electricity, nonferrous metallurgy chief among them, will also undergo development.

The organic synthesis industry, and particularly the new synthetics field, will be developed in Eastern Siberia in the near future chiefly on the basis of transported oil and the processing thereof at large plants of the petroleum chemicals industry, as well as on the basis of chlorine production, for which there is ample local raw material. Major pipelines are being laid to transport petroleum and petroleum products into Siberia. Doubtless industrial supplies of petroleum will be found in Eastern Siberia. Both the powerful coke-and-chemical plants, and the forest reserves of this district, constitute the basis of raw material supply for the organic synthetics. In the non-distant future, Eastern Siberia will become a national center of the cellulose and paper industry and, in particular, of industry for the production of the superior types of viscose cellulose needed for making high quality cord.

New centers for the production of synthetic rubber, of artificial and synthetic fiber and plastics will be established in a number of districts of Eastern Siberia.

The control figures for the seven-year plan envisage the creation of a unified power grid for the European portion of the USSR and for Central Siberia. The cheap electricity of Central Siberia (the average cost of electrical energy in the system being of the order of 1.5 kopeks per kwh) may, in the future, be transmitted in part to the industrial centers of the Urals. Available calculations show that it is more profitable to transmit electric power to the Urals from Eastern Siberia than to import steam coals from the Kuzbass and Karaganda for the production of electric power in the Urals. Via the Urals, the power grid of Central Siberia will be joined to that of the European portion of the USSR, and that will improve dependability of power supply to the user, reduce expenditures upon power plant construction, yield considerable fuel savings, etc.

The construction of major integrated iron-and-steel operations in Eastern Siberia is of particular importance to the development of new industrial centers and the proper distribution of the national economy. The iron ore supplies of Eastern Siberia assure for the foreseeable future the basis for construction of iron and steel industries in Krasnoyarsk Krai, Irkutsk and Chita Oblasts, and also in the southern districts of Yakutia.

An important special feature of the natural resources of Eastern Siberia is the concentration of highly valuable minerals: gold, diamonds, mica, tin, tungsten, molybdenum, etc. This is of high importance for the establishment of special mining and industrial centers for the recovery of these natural resources. The Lena-Vitim, Aldan, Trans-Baikal and other centers of the gold industry came into being in this way.

One of the world's largest diamond-mining centers is being set up in the Yakut ASSR. The outlines of the Siberian diamond district have been traced from the shores of the Laptevs' Sea to the foothills of the Eastern Sayans on the one hand, and from the Lena to the Yenisei River on the other. It would appear that the portion of this province richest in diamonds consists of the western districts of the Yakut SSR (the basins of the Vilyui, Markha, Olenek, Muna and other rivers). The diamonds here are most varied as to size and quality.

Thus, the structure and concentration of the natural resources of Eastern Siberia makes it possible to distinguish the following types of industrial centers: 1) integrated metallurgical enterprises; 2) integrated centers for production of power and industrial products with high ratios of cheap energy and groups of industries requiring a high supply thereof; 3) integrated mining industries (diamonds, gold, mica, tin, tungsten, molybdenum, etc.).

The economic administrative districts of Eastern Siberia contain a great variety of natural conditions, combinations of natural resources, and level of development of productive forces. This in turn defines the prospects for further industrial specialization and the place of these districts in the territorial distribution of labor. Despite all the uniqueness of the natural and economic conditions of the various economic districts of Eastern Siberia it is possible to differentiate three territorial economic complexes: The Angara-Yenisei (Krasnoyarsk Krai, Tuva Autonomous Oblast, Irkutsk Oblast), the Trans-Baikal (Buriat ASSR and Chita Oblast) and the Northeastern (the Yakut ASSR).

The distinctive characteristic of the Angara-Yenisei territorial industrial complex is the concentration of cheap resources of fuels and power, unique for the entire country, and this predetermines to a considerable degree the specialization of the industrial centers therein and their siting close to sources of electric power.

The following new, major industrial centers are now coming into being within the Angara-Yenisei complex: the Krasnoyarsk, Bratsk, Taishet, and Irkutsk-Cheremkhovo. The construction of industrial centers in the Sayans, along the lower Angara and elsewhere is projected for the future.

The Krasnoyarsk industrial center lies in the Achinsk-Krasnoyarsk-Kansk district. The cheap coals of the Kansk-Achinsk basin, the Krasnoyarsk Hydroelectric Station — most powerful on earth — the enormous resources of nepheline, the nearness of enormous deposits of iron ore (the Angara-Pit basin) and of the coking coals of Kuzbass, of titanomagnetite ores and of nonferrous and rare metals all make possible the development here of a whole new complex of large industries with output at very low cost. The natural conditions of Krasnoyarsk Krai are entirely favorable to the introduction of agriculture. Population density in this district is considerable.

The Bratsk industrial center is in the middle course of the Angara River. Natural conditions here are more severe. Production in this zone is chiefly of various metals and materials, the products of forest chemistry, and in particular viscose cellulose and paper.

The Taishet industrial center is a complex of ore-to-finished product iron-and-steel enterprises.

The Irkutsk-Cheremkhovo industrial center is a major center for the production of chemical semimanufactures and materials.

The Sayan industrial center is envisaged as one of the largest centers of future production of various types of metals and inorganic and organic chemical products.

The industrial center on the Lower Angara (Yenisei) ma in the future become one of the largest of power centers (with its Boguchan and Yenisei power plants). It is obvious that the cheap electric power should be transmitted westward at first, and in the most distant future should go to th development of new industries based on the mineral raw materials of the district.

Thus, the Angara-Yenisei territorial industrial complex will even in the forthcoming seven-year period start to grow rapidly in industrial potential. With the formation of these industrial bases, the Angara-Yenisei complex will, i the next 10 to 15 years, become one of the most powerful industrial complexes of the Soviet Union, particularly in the production of new industrial products requiring high ou lays of electric power and heat.

The Trans-Baikal territorial industrial complex is gradually coming into being in the economic administrativ districts to the east of Lake Baikal. The districts of the Trans-Baikal are as yet poorly investigated. However, the natural resources found here make it possible to rate highly the prospects for their development. The major we of this district, of importance to the USSR as a whole, is the great resources of iron ores and coking coals, and occurrences of nonferrous, rare and disseminated metals ar elements, the sillimanite shales of Buriatia, graphite, asbestos and other types of mineral raw materials, as we as forestry resources. Until recently no fuel and power resources of any significance were known to exist in the Trans-Baikal complex, and this limited the prospects for development of its productive forces on a large scale.

In recent years there has been a fundamental improvement in the situation, as regards the fuel and power resources of the Trans-Baikal. Prospecting of coal deposit has revealed additional resources of coals. In 1958 the geological reserves of the Kharanor occurrence are estim as in excess of 2 billion tons, and there are favorable prospects for its further expansion. The geological resou of the Goose Lake occurrence of lignites are calculated a 2.5 billion tons, and those of the mineral coal deposits of the Tuggui valley at a billion. The Aldan coal basin with resources estimated at 40 billion tons (of which approximately 90% are coking coals) has been discovered in Southern Yakutia.

The Selenga and the upper reaches of the Amur may, i the future, prove to be major sources of electric power. Derivation of electric power on the Selenga requires irri tion works in the valley of the Selenga and central Buria The construction of the Amazar Hydroelectric Station in upper Amur is most essential to combat floods which do heavy damage on both the Soviet and Chinese sides.

The following industrial bases may be envisaged for th future: the Buriat (Selenga) central industrial complex, t Nerchinsk metallurgical complex, the Argun (East Trans Baikal) industrial complex, and the Southern Yakutia met lurgical complex.

The Nerchinsk and Southern Yakutia centers of produc tion are today essentially ready for the creation in the fu of major metallurgical plants in the Trans-Baikal. The iron ore and mineral coal basins of Southern Yakuta con tute a unique combination of major resources of high-qua iron ore and high-quality coking coals. In order to build metallurgical complex in Southern Yakutia and to provid coke to the plant at Nerchinsk it will be necessary to bui a rail line 700 km long during the forthcoming seven-yea period from Bam station on the Amur Railway to Chul'm

When steam electric power and the power of the Amur Hydroelectric Plant are available, the Argun industrial center may base itself on the metallurgical conversion of polymetallic ores and the ores of the rare metals, the raw material supply for which is particularly significant in this district.

The Buriat (Selenga) industrial center is capable of development not only as a center for the many-sided processing of sillimanite and rutile shales and the rich resources of mineral raw materials of the Eastern Sayans, Khamardaban and the districts adjacent to Lake Baikal. Efforts to combat drought, with rational utilization of the water resources of the Selenga district open favorable perspectives for the development of agriculture.

The development of the economy of Siberia and the Far East will result in the beginning of formation of the Northeastern economic geographic district as a new district embracing the Yakut ASSR and Magadan oblast. The natural conditions, the specific problems of industrial development and the bonds both between individual portions of the Northeast, and with Siberia and the Far East and other districts of the country predetermine the desirability of delimiting the Northeast as a new, large economic geographic district. Thus far, the Yakut ASSR comprises part of Eastern Siberia. Both the existing industrial centers and those in prospect (except for the South Yakut metallurgical complex) may be regarded essentially as centers of the mining-industrial type. These include the Aldan gold district (which in the future may be filled out with the development of the South Yakut industrial region), the Vilyui diamond district, the Yana-Indigirka mining district (gold, tin, polymetallic ores), and the Olekminsk salt mine region. A natural gas and petroleum industry is scheduled for establishment in the center of Yakutia in the not too distant future. With further investigation of the natural resources of Eastern Siberia, new resources of mineral raw materials in this district will be discovered. However, a long-range plan for the scientific investigation of Siberia and the Far East should be blocked out now, with first priority to be given to the finding of the required natural resources, and to the districts where high-priority, large industrial bases are being created and developed.

Questions of establishment of new industrial bases in Eastern Siberia, and in other large economic geographic districts require profound economic and technical investigation. Scientific economic investigations should precede, in point of time, the period for which planning is to be done, and should provide the planning and business agencies with scientifically-founded material for long-range planning.

The fundamental scientific document to be developed during the pre-plan period with a long-range outlook, should, for the new districts, be the hypothesized development and economic mastering of large economic geographic districts, such as Eastern and Western Siberia, the Far East, the Central Asian republics, etc. The prime constituents of these suggested plans should be: a) a profound technical and economic analysis of the efficiency of the natural resources of the district, as compared with other districts; b) determination of possible perspectives for the development of technology and equipment for the industrial utilization of the natural resources, and discovery of the country's need for new materials; and c) an economic analysis of the prospects for the development of the national economy in the new industrial centers as loci of high concentration of valuable natural resources, and a scientific rationalization for their distribution throughout the economic geographic districts of the country.

A correct posing of the scientific investigations in this direction will make for perfection of methods of long-range planning and scientific development of problems of distribution of socialist production.

O. Kozlova and V. Girovsky:* †

Training Economic Cadres for Industrial Enterprises

An important component of the grandiose program for the upbuilding of communism in the USSR is represented by the major measures for development of public education developed by the Party and government. These measures have been set forth in the Law on Reinforcing the Contact Between Schools and Life and on Further Development of the System of Public Education in the USSR, adopted at the second sitting of the Fifth Supreme Soviet of the USSR.

"Despite the outstanding achievements in the development of the Soviet school and in the training of personnel for all branches of the national economy and culture," the law reads, "our public school system, our specialized high schools and our higher educational institutions lag behind the requirements of the upbuilding of communism and display serious shortcomings. The most important of these is a substantial degree of isolation of education from life, and a weak level of preparedness of graduates for practical activity. At the present level of the upbuilding of communism this shortcoming in the system of public education is particularly impermissible."

We should like to devote our attention to analysis of a number of significant shortcomings in the training of economist personnel in the country's higher educational institutions, and particularly of economists to work at industrial enterprises and construction projects, and to introduce a number of suggestions which would, in our opinion, facilitate improvement in the quality of higher education in economics.

Under the present conditions, when the problem of improving the economic efficiency of socialist production is acquiring ever greater significance, the role of economic activity in the enterprises is gaining in importance. This work should be directed toward mobilizing all available reserves for increasing production, increasing labor productivity and reducing cost of production.

It should however be noted that the organization of production and intra-enterprise planning at many enterprises does not correspond to the growing requirements and does not provide full utilization of the favorable conditions resulting from the reorganization of management of industry and construction. Thus, a method of calculating productive capacities that does not make possible complete discovery of resources is still in use. The efficiency of the new equipment and technology are often estimated at the enterprises without due consideration for capital expenditures in the light of the position of the national economy as a whole, or of the time factor. Work quotas statistically derived from existing levels of output per worker are still used at a large number of enterprises. Elaboration of problems of organization of production lags significantly behind the rates of technical progress.

Economic planning at the enterprises, evaluation of the efficiency of different variants of the plan, and determination of technically-substantiated standards for outlays of abstract and concrete labor involve a substantial volume of computation. The fact is that modern computer technology has received no significant application at all in industrial economics, and economists at the plants continue to perfor economic operations for purposes of planning with the aid of tools such as the abacus and the adding machine.

The lag in economic operations at the plants is condition to a considerable degree by the level of education of the economists they employ. Persons with higher education ar still few among the economists of the industrial enterprise and construction projects. Economics and the organization of production at the enterprise level is engaged in chiefly by so-called practical people, more than half of whom do n even have high school education. However, even many economists with higher education do not cope adequately with the rising problems of economic planning at the enterprises, and, to no small degree, this is due to the existing system of education of economist personnel.

We know that large-scale training of economists for the national economy was begun in our country as far back as the years of reconstruction. At that time economist planne were needed primarily for employment in the government planning agencies, in the All-Union Council for the Nationa Economy and the national economic councils, and later in the ministries and chief administrations. In addition, training of economists for the individual enterprises was undertaken. This was the period in which a number of colleges and departments in the field of planning and economic plan were established.

The low level of economic work at the enterprises at tha time required an all-round planning economist with some degree of general training in economics and skill in the simplest kind of calculations for this purpose.

With the development of the national economy, the problems of improving the economic indices of operation of th enterprises, and the study of technology and its fuller utilization by the personnel became necessary. In connection with these problems, a new professional classificatio came into being: the industrial economist specializing in a particular branch of industry. Three colleges of industria economics and a number of departments of industrial economics and various institutes of technology were established to train persons in this category.

Thirty years have passed since the beginning of the First F Year Plan. The Soviet land, having scored glorious trium in the development of its economy and culture, has today entered a period of large-scale upbuilding of communist society. The technical level of production has undergone fundamental change as the result of technological progres and the development of science. The chemical industries of today, for example, differ greatly from the first enterprises in this branch of industry both in the nature of the products they produce, and in the technology employed therein. The modern coal mine has changed beyond recognition. During the First Five-Year Plan the air hammer was the tool, and today coal cutters and, to an ever increing degree, mining combines, predominate. In the manufature of machinery, as before, a large number of universa lathes are still to be found, but qualitatively they are entirely different: they have been mechanized and automated to a considerable degree. Recently they are coming to be equipped with various types of devices for programmed control, and soon departments with universal-type equipment will have relatively few workers, their function being limited primarily to observation of the work of the machines, set-up and repair. Alongside the universal equipment, more and more automatic lines are making their appearance in the machine shops, and these then become automatic departments and enterprises. The change in the techniques and equipment used in production requires that the personnel of the enterprises systematically raise the level of their knowledge.

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It must be stated that technical education in our country has, to a considerable degree, developed with consideration of the latest achievements in science and engineering, on the foundation of the requirements of branches of material production newly developed on the basis of engineering progress in the branches of material production. Nevertheless, recently a definite degree of separation has come to be felt between the training of experts in the field of technology on the one hand, and practical life on the other, and the need for reorganization of engineering education in our country has come to be felt.

As far as the system of training for economics is concerned, it has undergone no significant changes in the past 30 years. Life has long been requiring that, in connection with the vast changes occurring in our national economy, serious study be given to the status of education in economics, and that the problem of its future direction be resolved.

The development of the social division of labor, and the rapid rates of technological progress urgently demand the training, for the country's enterprises and construction projects, of personnel having detailed familiarity with the equipment and processes of a specific branch of industry, and also with the latest in computer technology. Special proof is hardly needed for the indisputable truth that an active, organizing function at an enterprise can only be performed by an economist fully familiar with the organization and technology of the given branch of production.

Many years of experience of socialist industry show that economic activity at the enterprises is performed most successfully by persons with training in engineering as well as economics. Alongside their profound general theoretical training, industrial engineers receive, at appropriate colleges, the required knowledge in the field of the technology of a concrete branch of production (machinery manufacture, chemistry, metallurgy. power, construction, etc.) with consideration of the latest achievements in science and engineering, and of the most advanced experience at home and abroad. The broad range of training of industrial economists makes it possible to employ them at enterprises and construction sites for work in the organization and planning of production, the organization of, and quota-setting for labor, in traffic control, in purchasing, and in other fields.

It is quite obvious that at the present stage of development of industrial production, no specialist, including economists, is capable of having detailed knowledge of all, or even of the main branches of industry. However, to this day, 20 higher educational institutions, including 8 universities and 6 colleges of industrial engineering, train a substantial number of experts in the economics of industry as a whole. Economists graduating from such institutions do have substantial training in general economics, but possess only the most superficial knowledge of the organization and processes of production in individual branches of industry. The course in technology studied by students in this field is an artificial conglomeration of descriptive data on a whole series of branches of material production: ore mining and fuels, production of building materials, construction, the chemical industry, ferrous and nonferrous metallurgy (including the fundamentals of metallography), the construction of machinery (including the parts of machines, casting, the pressworking of metals, metal-cutting, machine tools, etc.). Moreover, the students studying this course in technology, which is heavy in the number of hours assigned and limitless in the fields it surveys, do not have general training in technology. How can one speak seriously of study of the processes of the chemical industry if the student had previously taken only a high-school course in chemistry, while in college he had studied neither inorganic, organic, analytical or physical chemistry? Or how can questions of engineering cost estimates for various structural components (walls, roofs, floors, etc.) be studied if the student has not the vaguest idea of the mechanics of erection, calculation of estimates, etc.? The capability of study by the students of problems of analysis of metals for strength, safety factors and the utilization of metals in machines, the kinematics of machines, etc., without prior mastery of at least the fundamentals of theoretical mechanics, strength of materials and other general engineering disciplines, is highly problematical, to say the least. Similar examples can be added to indefinitely. Thus, students being trained in "the economics of industry" do not acquire any serious knowledge in the field of the organization and technology of production in any single specific branch of industry.

Of course, many graduates from colleges and departments of economics are working at various enterprises with reasonable success, but they are compelled to acquire, in the course of their practical work, the knowledge they lack on the technology of the branch of industry in which they work, and this takes a great deal of time. The majority of economists who have had this type of indeterminate training limit their activities at the enterprises to the simplest kind of planning calculations, and are not in any position to solve serious problems involving the discovery and utilization of additional capacities hidden in the operation.

In recent years, the USSR Ministry of Higher Education has somewhat reduced the scale on which economists with this all-round training are turned out for industry. But the ministry has not yet taken principled and consistent positions on this problem.

In the light of the grandiose problems of development of industry in the forthcoming Seven-Year Plan, it is necessary to undertake a fundamental re-examination of the system of training economist personnel. The problem of the scope of the training to be given to economists trained by higher educational institutions for work at enterprises and construction sites directly engaged in the production of material values, is particularly acute.

None but industrial economists should be trained for work at plants, construction sites and transportation. They should be educated only by colleges of industrial economics and the departments of industrial economics at the engineering colleges. It is self-evident that the personnel required for economic activities in the agencies having the management of industry (the national economic councils, ministries, planning and local Soviets) should also, as a general rule, be specialized branch by branch and should, furthermore, possess serious experience in work on enterprises, construction sites, etc. This applies equally to economists working in scientific, production engineering and designing institutions.

In connection with the forthcoming reorganization of higher education, it appears to us to be most desirable to educate the students of colleges and departments of industrial economics in the following two forms.

Students with much experience in the branch of industry in which they will specialize in college should study full-time during the first four years. During this period they will study the entire fundamental cycle of general-theoretical, technological and economic disciplines. During the first four years, much attention must be given to the teaching of the social sciences, and also to foreign languages. In the fifth year, this category of students should study while working so as to gain experience in technology and its economics on the job, and gather data for their theses.

The themes of theses should be realistic and flow directly from the production requirements of the enterprise where the student is employed. The thesis should contain proposals for improving the organization of some branch of production and should as a rule have to be defended right at the enterprise. During the period of writing the thesis (for which half of the sixth year should be assigned), students should be freed from work on the job so as to concentrate all their attention on completing their education and producing a work of practical value.

The education of the second group of students, consisting of those coming to industrial economics colleges and departments lacking adequate experience in their chosen specialty, should be organized differently. During the first year, the education of such students should be combined with jobs. It is essential that the student's work be in an enterprise in the very branch of industry in which he will specialize in college. During the following three years, students may be freed of the requirement that they hold jobs in industry. The education of this category of students for half of each of the fifth and sixth years should be pursued in a manner analogous to that set forth above, as suggested for students who have come to college off the job.

In connection with the need for substantial expansion of training in industrial economics, one more important question of organization demands solution. Experience has shown that the departments of industrial engineering existing in the engineering colleges do not occupy a position of leadership in these institutions. To some degree, this is due to the relatively small number of students and, consequently, of faculty of the economics departments. In addition, it must be noted that the engineering colleges are far, as yet, from having overcome the underestimation of the value of problems of economics and the organization of production.

In order to assist these faculties in matters of method, it would be desirable that there be one major center for methods in education in the country in this field, with a staff consisting of an adequate number of experienced professors and instructors. Such a center should be the chief college of industrial engineering, preparing specialists for the leading branches of industry, and also for construction, transport and city management. This college should provide methodological leadership in the training of industrial economists in the entire system of day, evening and correspondence schools and should also be the methods center for refresher courses in economics and the organization of production.

The leading college of industrial economics should be assigned the training of management engineers familiar with the latest in computation, including electronic, techniques, and capable of employing it in the organization, planning and account of production at the enterprises and in the national economic councils. This same institute should take active part both in the developments of objectives for the design of electronic machines specially designed for economic calculations at the enterprises and in the national economic councils, and in the introduction of newly-develop machines into practice.

In addition to the leading college of industrial economics, it would be highly desirable to establish in various districts of the Soviet Union, including Siberia, Central Asia, the Ukraine, etc., a number of supporting colleges of industrial engineering. Their function would be to serve as local centers for the training of economist personnel for the ente prises and, in cases in which this is necessary, to provide guidance in method of education in industrial economics for their portion of the USSR.

A few words, now, on the planning of training of economis personnel for the enterprises and construction sites.

In his report to the 20th Congress of the CPSU, Comrade N. S. Khrushchev stated: "Strange as it may seem, the training of specialists for various branches of the national economy has hitherto not rarely been defined not by the prospective development of these branches, but to a considerable degree by the unfounded and often inconsistent demands of the ministries and departments." Three years have passed since these words were uttered, but there has been no significant change in the situation. Let us take the single fact that, despite the very broad prospects for the development of the chemical and metallurgical branches of industry in the USSR, the last few years have seen a systematic contradiction in acceptance of students in these dis ciplines at the day courses of the industrial economics colleges.

It is necessary to bring order into the planning of the training of economist personnel for industry and construction. With this object, the State Planning Commission of the USSR, with the participation of personnel of the corres ponding government committees under the USSR Council of Ministers, the individual ministries and the national economic councils should, in the briefest possible time, elaborate, with consideration of the prospects for the development of each branch, a plan for the training of industrial economists specializing in particular branches, to cover the years 1959-1965.

A most important problem before the national economy that of increasing the skills in economics of the personnel employed at the respective enterprises and construction sites. The need to increase the level of economic knowled is becoming recognized ever more widely by managerial a engineering personnel. This is borne witness to, in particular, by the fact that some 250 personnel of Moscow ent prises and construction prospects with higher engineering education are studying part time at the two-year high-leve course in industrial economics recently established at the S. Ordzhonikidze Institute of Industrial Economics at Mos In 1958 alone, 280 individuals with higher education were accepted into the correspondence department of this Institute.

The high level of interest in questions of economics is also testified to by the active participation of industrial personnel in the work of scientific conferences on problem of economics and the organization of production convened by the colleges of economics.

It is necessary that elevation of the economic skills of workers of industrial enterprises and construction projec be organized on a government-wide scale. This important matter must be brought to the attention of planning agencies, the national economic councils, the ministries, and of local Soviet and Party agencies.

In order to improve the economic skills of persons with higher education (this category may be defined to include persons with secondary special education who have more than five years of industrial experience), it is desirable to organize evening refresher courses in economics and the management of enterprises and construction projects in the colleges and departments of industrial economics, which have faculties of a high order. The term of instruction at these departments should be two years, and training must proceed parallel with work on the job. Another practical form of improving the economics skills of this category of practical people may also be self-study in the form of correspondence study of economics literature disseminated through the university refresher-course departments.

For workers of enterprises and construction jobs having specialized secondary education (and less than five years of practical experience) or academic secondary education, it is desirable to set up evening refresher courses in the field of economics and management. Such courses should be organized by the national economic councils, republic-wide ministries, local Soviets, and also by large enterprises and construction projects.

Practical people not having complete secondary education should be assisted in obtaining special education through the system of evening and correspondence technical high schools.

In order for enterprise personnel to be interested in raising their economics skills, legislative action should be taken to establish differences in pay within the established salary scales, in accordance with level of education.

A negative effect upon the quality of economic work at enterprises and of educational activity at the higher educational institutions is presented by the lack of a single scientific center on matters of economics and the organization of industrial production. The existing institutes of economics (of the Academy of Sciences and the State Planning Commission of the USSR) deal mainly with economic problems of the national economy as a whole, and it is beyond their function to resolve problems of plant economics and the management of production. Scientific research in these fields is conducted chiefly by engineering design institutes for the various branches of the economy, but for the most part in accordance with current problems before the given institutions.

The fact that the need to expand scientific work in this field has matured is borne witness to by the creation of a number of national economic councils, of research laboratories for economics and industrial management. Specifically, such laboratories have been organized by the Moscow city national economic council as an adjunct of the S. Ordzhonikidze Institute of Industrial Economics, by the Leningrad national economic council at the Leningrad Institute of Industrial Economics, by the Kuibyshev and other national economic councils at local colleges, etc. The scale of operations of the largest of these economics and industrial management laboratories — that established in Moscow — may be judged by the fact that the plan of work of this laboratory for 1958 includes 21 themes, and that its staff comprises over 150 persons. It should, however, be remarked that the laboratories created by the national economic councils limit themselves to the elaboration of problems local in nature and naturally cannot resolve general economic problems, which are of importance to industry as a whole.

The necessity has arisen for the creation of a central research institute for the elaboration of the most important problems of economics, planning and the organization of production at the enterprises of the leading branches of industry. This institute should also be assigned functions in coordination of the scientific work being conducted in these directions by branch-wide institutes and scientific research laboratories established by the national economic councils. Along with this, it is desirable to recommend to the national economic councils an expansion of the practice of organization of this type of laboratory in conjunction with colleges dealing with the appropriate areas.

A significant role in improvement of economic education and increasing the level of economic work at the enterprises could be played by a special journal on problems of economics and the organization of industrial production. It is public knowledge that, during the First and Second Five-Year Plans, we published a large number of journals and several newspapers dealing with problems of plant economics and management. In addition, it would be necessary to change the emphasis of the Promyshlenno-ekonomicheskaya gazeta so that its major concern becomes problems of economics at the enterprises and in the national economic councils.

A. Ferberg:

An Important Condition for Fulfillment of the Plan for Capital Construction

The control figures for the development of the USSR national economy for 1959-1965 propose the volume of capital investments in the national economy to be 1,940-1,970 billion rubles. With capital investments at so huge a level, problems of strict adherence to plan in capital construction take on increasing importance.

Adherence to government discipline is an important condition for the fulfillment of the plan of capital construction. Failure to fulfill plans for capital construction results in slowing the rate at which major capacities are brought into operation and in violations of established proportions in the development of the various branches of the economy, with the result that the efficiency of capital investments is reduced, the dates at which products begin to be obtained from enterprises being erected or expanded are postponed, and the rate of growth in the national income is reduced.

The dragging out of construction schedules for long periods withdraws substantial material resources into incompleted construction and results in an increase in incomplete capital construction jobs. In the last three years alone, the volume of incomplete construction has risen by 30 billion rubles. In 1957, incompleted construction on jobs subject to national economic councils of the Russian Federation rose by 3.7 billion rubles, attaining a total of 56 billion rubles, and this is virtually equal to the annual volume of completed construction work. The volume of incompleted construction under the Kemerovo, Bashkir, Rostov, Krasnoyarsk, Irkutsk, Sverdlovsk, Chelyabinsk and Kuibyshev economic administrative districts is particularly great. Incomplete construction on projects subordinate to the national economic councils of these districts was more than 40% of the total volume thereof in the RSFSR.

The large volume of incomplete construction is significantly due to shortcomings in the planning, organization and conduct of capital construction, and primarily due to the faulty practice of dispersing capital investments over a large number of projects. The dispersal of capital investments was due primarily to the effort of the heads of various planning and business agencies to provide only for that increase in output attainable by the building of new enterprises, and not by improving the organization of production, the mechanization and automation of production processes, elevation of labor productivity, superior utilization of available capacities, and the expansion and reconstruction of enterprises in operation. The dispersal of funds was facilitated by the subordination of enterprises to national departments, inadequate consideration of possibilities of subcontracting and specialization in industry, etc. Failure of many building organizations to fulfill their plans, and incomplete provision of equipment, apparatus and special materials to enterprises under way also contributed to the rise in unfinished construction.

At the All-Union Construction Conference in April, 1958, it was noted that funds and materials were dispersed among many projects and that planning practice had therefore to be amended. Funds, materials and workers in each district have to be concentrated in a limited number of projects. This makes it possible to complete construction in brief periods. Under these conditions, equipment goes into operation more rapidly, the funds invested in the development of a given branch of the economy are more rapidly amortized. This is the only proper procedure, and should be held to. But in fact things do not often go in this way: everyone tries to get hold of the largest possible sums and to spread them over the largest number of construction projects.

Let us cite a few examples found in the course of a chec up performed by the Industrial Bank. The Tatar National Economic Council included 419 newly begun items under construction in the lists of 43 large projects being built in 1958, of which there were 306 with a total volume of 284,000,000 rubles for which no documents containing estimates of construction costs were provided. At the same time, this national economic council was 78 million rubles short in funds needed to finish the construction of 91 projects that were scheduled to go into operation in 195 Analogous data may be cited for other national economic councils. The funds assigned for the construction of a single plant in Tambov Region were distributed among 52 projects. Yet a portion of the units to go into operation at one of the industrial complexes being installed at this plant were not guaranteed funds sufficient to get them into operation. At the same time, new units were added to the list: a restaurant, a raw materials warehouse, a stripper, a Young Pioneer camp, etc. At the concrete-reinforcing bar mill under the Penza national economic council, a complex of units interrelated with other types of work (a found with its transmission lines, the water supply, the cable lines, etc.) were not assured the funds required to place them in operation, the shortage being 1,100,000 rubles. Nevertheless, the list for 1958 showed three new items of an estimated cost of 1,700,000 rubles.

The dispersal of funds set aside for capital investments over a large number of projects, without regard to completion of projects formerly undertaken, also constituted a consequence of the ignoring, by certain planning and busin agencies, of standards published in 1956 for the duration o construction of enterprises, objects and structures design for the planning of capital investments. These agencies continued to make annual allocations to the construction projects regardless of the standard terms of duration of construction. Failure to adhere to these standards result in dragging construction out over unjustifiably long perio Thus, in 1958, the Bugul'maneftestroi Trust failed to assi sufficient funds for completion of a school started in 1957 while this building should have taken not over six months build under the construction standards. In 1958, the Kaliningugol Trust provided only 1,500,000 rubles for the construction of a plant to make products of reinforced concrete, while the volume of uncompleted work on that plant was 4,000,000 rubles. At this rate that plant will take over four years to build, instead of one, in accordance with the standard.

In 1958, the Party and government adopted a number of decisions of major importance, the fulfillment of which will reduce the terms required to build undertakings and get them underway in the specified time. Note has been taken of the incorrect practice of those organizations and enterprises which do not concentrate funds for completion of projects underway and scheduled to go into operation, but start new construction or disperse their material, labor and financial resources over a large number of objects to be built. A prohibition has been ordered against starting the construction of industrial enterprises and structures not assured of capital funds and the supplies of equipment and materials needed to finish them in the periods established by the standards for terms of construction. It is decided to issue funds for new construction only after final completion of items scheduled to go into operation and completion of the construction of projects under way, within the established standard periods.

The theses of the report by Comrade N. S. Khrushchev emphasize this requirement in the planning of capital investments with particular force: "Strict observance is required of a procedure under which each project undertaken is provided with materials and funds for the entire period of construction, based on the possibilities for completing the construction in the shortest possible time. Funds for new construction should be issued only under the condition that funds are available in adequate volume for projects under construction and particularly for those scheduled to go into operation." In this connection the significance of standards of duration of construction increase. They now become the solid foundation for the planning of capital investments. Planning and financing institutions should be guided thereby in determining the volume of capital investments, and also in the compilation of plans for capital investment and plans for supply of materials and equipment. The planning agencies, the national economic councils and the ministries should allocate funds for construction at a scale adequate to build them in the established periods. Adherence to standards in the planning and carrying out of these operations accelerates the launching of major items and reduces the volume of incompleted construction.

In view of the fact that the standards for duration of construction are major tools in the planning of capital investment, it is necessary to improve them and to eliminate shortcomings therein. The composition of the branches of industry for which standards of duration of construction have been established must be expanded, and they have to be developed for branches not embraced by the standards established in 1956, primarily for the chemical industry, in which, in accordance with the decisions of the Plenum of the CC CPSU of May, 1958, enormous sums — in excess of 100 billion rubles — are to be invested.

The theses of the report by Comrade N. S. Khrushchev note the possibility of reducing the terms of construction in all branches of the national economy. This is confirmed by the experience of the most advanced construction organizations. Today large blast furnaces take 6 to 8 months to build. However, the blast furnace construction standards for iron-and-steel mills allow 21 months for erection of the first blast furnace, and up to 13 months for subsequent ones. The standards allow 8 months for the building of 3- or 4-story houses, and up to 14 for the building of houses of 7 or 8 stories, but this also fails to correspond to the experience of the most progressive construction projects. It is necessary to re-examine the standards of duration, from time to time, with consideration of the progress made in the building industry. Each year, with the accumulation of experience gained as they are applied in industry, it is necessary to correct and amend the standards. The first series of such corrections should have been introduced at the beginning of 1959.

It is also necessary to eliminate individual shortcomings in method within the standards. The standards envisage terms for construction and typical allocation of capital investments by year for the complex of units comprising an enterprise, and, in individual instances, for the structures of fundamental productive purpose. However, in the erection of enterprises, considerable sums are expended upon the construction not only of primary, but of secondary structures, such as those in the field of power supply and transportation, plant and external communications, etc. When construction is carried on over a long term of years, these items go into operation gradually, in the volumes needed for the normal functioning of the primary installations going into operation, and no instructions are provided in the standards on annual distribution of expenditures for these purposes. Thus, the distribution of capital investments per year of construction of machinery-manufacturing plants are envisaged in the standards only for the foundry, forge, machine, machine-assembling, tool and certain other basic shops. However, expenditures for the erection of these departments are, for example, only half the total estimated cost of construction of the Ivanovo Boring Mill Works or the Ryazan Forging Press Equipment Works.

The standards contain instructions to the effect that the annual allocations of capital investments to items of secondary importance is determined by the complex of units to be launched into operation. Contained therein, in addition to work on the construction and assembly of equipment for the primary object, are work to be done on the construction and assembly of equipment for auxiliary and subsidiary units and structures (transformer substations, power transmission lines, steam lines, gas lines, water supply and sewage, ventilation, structures to serve the needs of the personnel, railways, highways, etc.), the launching into operation of which are essential to the normal functioning of the major item. These instructions are totally inadequate for the proper planning of the scale of capital investments required to assure the launching of projects scheduled to get under way, under conditions of construction over a long term of years. The standards contain no information as to how the units to go into operation are to be grouped, and whose responsibility it is to compile this listing. Many construction projects don't have any plans for the organization of construction, which should serve as the foundation for the compilation of the lists of units per annum, and in other cases these plans are out of date. Often the annual volumes of work on secondary units of construction, which should be built in order to get the main unit into operation, are determined independently of real necessity. Therefore the elaboration of methodological instructions on the procedure for defining the combination of units required to launch operations one section at a time, and of standards for determining annual volumes of work on all the units in the named list for a construction project is a task that cannot be postponed.

An increase in the efficiency of capital investments in the national economy assumes strengthening of supervision by the planning and financial organs over adherence to standards for construction time when construction plans are examined and approved. Under the present procedure, the approved plans and lists of units go to the long-term investment banks. Hitherto the banks have financed the construction regardless of whether the funds allocated to construction projects guaranteed completion of construction in the periods envisaged by the standards. It is necessary to change this procedure. The banks must not finance construction newly undertaken if the assigned funds do not guarantee adherence to the established terms of construction.

Today any organization (plant, factory, administration) that has received un-earmarked funds for capital investment, is free to start the construction of new enterprises and lesser projects. As a result, work is begun each year on a large number of new projects. In order to accelerate the process of cutting down the excessive volume of unfinished construction and to raise the economic efficiency of the capital investments, it is necessary to change the order by which new projects and individual items of construction are listed in the official listings by designation. These listings should include only such objects without which solution of some given production objective cannot be solved by means of the functioning productive capacities of the given economic district or by sub-contracting to enterprises in other districts of the country. The inclusion of new construction projects and individual structures in the list should have to pass through a special procedure to be established in relation to cost estimates.

The construction industry has a system of issuance of bonuses for on-time and ahead-of-time placing into operation of the most important structures, on the condition that the established requirements for the quality of the work and adherence to the estimated cost of construction and structural assembly be adhered to. The problem of accelerating the rate at which structures are brought into operation and the volume of incompleted construction is reduced requires that amendments also be made in this system of bonuses. One of the primary conditions for receiving a bonus must be that of adhering to the established conditions for duration of construction.

Without limiting ourselves to measures organizational in nature, it is desirable to examine the question of the relation between the methods of financing and the economic efficiency of capital investments in the national economy so as to raise the material responsibility of economic organs for the utilization of the funds placed at their disposal.

The reorganization of the administration of industry and construction carried out in 1957 at the initiative of the Central Committee of the Communist Party of the Soviet Union has provided major positive results. Thanks to the reorganization of the management of the economy, the conditions have been created for better fulfillment of the plans for the development of the national economy, including the plans for capital construction. The plan of capital investments in the second half of 1957 was fulfilled 104%, while during the first half of the year there was only 91% fulfillment. During the first half of 1958, capital investments in the national economy exceeded the volume of capital investments during the corresponding period of the preceding year by 11%. The six-month plan for assembly of structures by subsidiary organizations was carried out 101%.

Successful fulfillment of the plans was furthered by the extension of the rights of the republics and the local agencies in the utilization of funds set aside for capital investment. The Councils of Ministers of the republics and the national economic councils were given the right to redistribute capital investments envisaged by the plan among the branches of the national economy and the branches of industry. The extension of the rights of the republics and the economic administrative districts led to a further development of the initiative and the creative activity of the masses, and created conditions for better and more complet utilization of the funds set aside for capital investment. The rational utilization of these rights makes it possible to increase the basic equipment brought into operation and to increase the efficiency of capital investments in the branche of the national economy.

The majority of the national economic councils adhere strictly to the established plans of capital investments and their utilization of the right to re-assign funds is quite proper. However, there have, in various places, occurred violations of the established procedure for distribution and redistribution of capital investments, and dissipation of appropriations and diversion of funds to structures of secondary importance has occurred. Here and there, there have been national economic councils that have not fulfilled the requirements of government financial discipline and have used, for other purposes, funds assigned to the financing of capital construction in branches of heavy industry. Let us cite some examples of this.

The Karaganda national economic council illegally reduced the volume of capital investment in the coal industry, ferrous and nonferrous metallurgy by tens of millions of rubles, and channelled these funds to the building of a circus a theater, a health resort and other, similar structures. The Lugansk national economic council reduced the investments in the coal industry by 40,700,000 rubles and allocate these funds to its division of economic management for the construction of office, civic, cultural and service, and other structures. The Stalinsk national economic council channelled 24,000,000 rubles obtained by cutting investments in the coal industry into the building of housing for personnel of the council, erection of communications facilities for the council, etc. The L'vov national economic council channelle 24,000,000 rubles to construction of structures for the peat industry, brickworks and the expansion of the industries serving the construction organizations, correspondingly reducing capital investments in the coal industry. Violation of government discipline also occurred in the Gorky, Kuibyshev, Lipetsk and other national economic councils.

The national economic councils of the economic administrative districts have been given the right to create reserves for capital investment, for which an established procedure must be followed. By the use of this right, the national economic councils may speed up construction projects where the plans for major work are being successfully fulfilled, and may shift funds with the object of providing better financing for capital construction plans. Violations of the procedure have been permitted in particular economic districts. Some of the national economic councils have utilized the reserve formed by capital investments in heavy industry to build enterprises in the light, paper and woodworking branches of industry, and office buildings for planning, supply and other organizations. Thus, the nationa economic council of the Armenian SSR used 6,500,000 rubl of a capital investment reserve built up from appropriation for ferrous and nonferrous metallurgy and chemical indust investment for the building of units in other branches of industry. The Kharkov national economic council formed a 5,100,000 ruble reserve from capital investments in the chemical and other most important branches of industry and channelled it into the erection of buildings in the paper and woodworking industry, the building materials industry, etc. The Gorky national economic council dipped into a capital investment reserve of 24,600,000 rubles from the chemical industry for 20,000,000 rubles for other branches of industry.

The utilization by various national economic councils, for other purposes, of capital investments set aside for the development of branches of heavy industry has been condemned by the party and government as an anti-governmental action bringing serious harm to the development of the national economy. Measures have been taken to prevent future engagement in this practice by the national economic councils and to strengthen the monitoring by the planning and banking agencies of proper utilization of government funds going to heavy industry so as to eliminate the possibility of repetition of such distortions in the future. The banking institutions must fight actively for proper utilization of funds set aside for capital construction, and inform agencies of party and government of instances of violation of the government plan for capital construction, and demand the repeal of decisions to redistribute capital investment such as lead to improper utilization of appropriations for capital construction.

We know that resources that the government may assign for capital investment are limited to the dimensions of the accumulated portion of the national income. The interests of the development of the national economy require further concentration of financial and material resources on the most important projects scheduled to go into operation. This is particularly important in connection with the forthcoming substantial rise in the volume of capital investments in the decisive branches of heavy industry. It is necessary strictly to adhere to the territorial and economic structure of the plan for capital investments. Violation of this structure inevitably leads to the development of disproportions in the national economy, inhibits the realization of plans of development of the individual branches. It is necessary to achieve a situation in which the appropriations made to develop the leading branches of heavy industry are utilized in their entirety and go to the construction of the most important items to be built. Therefore it is desirable to write into the control figures a point that would prohibit the withdrawal of capital investments allocated in the state plan for the development of the most important branches to other projects, or violation of the legal procedure for redistribution of funds. Adherence to government planning and financial discipline, and the utilization of funds set aside for capital investment only in those branches and for those undertakings for which they are designated must become law for all planning, business and financial organizations.

The Party has always demanded, and demands, strict adherence to government discipline. It decisively strikes down all manifestations of localism bringing harm to the interests of the country as a whole. In the draft of the "Instructions from the Council of Labor and Defense to Local Soviet Agencies," V. I. Lenin wrote: "What action is being taken against personnel who serve the locality at the expense of the Center and counter to the orders from the Center? Names of persons penalized? Are instances of such violations being reduced? Are the punishments being made more rigorous, and if so, how?"*

The reorganization of the administration of industry and construction has led to a strengthening of the Leninist principles of democratic centralism and of the leading role of planning in the guidance of the economy on a countrywide scale. Unconditional observation of government planning and financial discipline is a most important consideration for the fulfillment of the plans of capital construction, the plans for the development of the national economy of the USSR.

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* V. I. Lenin, Collected Works (Russian), Vol. 32, p. 365.

A. Omarovsky:

Problems of the Structure of Industrial Production in the USSR

The problem of the structure of industrial production is one of the most important in economics. The study of structure and its variations in the preceding period, and analysis of progressive tendencies in the development of industrial production on the basis of the latest achievements of science and engineering make possible a correct determination of the most rational courses of development of industry in the future, in accordance with the demands of the law of planned, proportional development of the national economy, and in the interests of achievement of the maximum productive effect with given resources of labor power and material means.

One of the primary problems of national economic plans is determination of the structure of industrial production, or in other words the relationships among various branches of industry in the national economy. The difficulty in establishing these relationships properly lies in the fact that the structure of industrial production changes constantly under the influence of numerous factors, the various branches being interrelated in multi-faceted and complex ways. "A revolution in the method of production in one sphere of industry conditions a similar revolution in others. This pertains particularly to those branches of industry which are interwoven as phases of a single common process, although the social distribution of labor has isolated them to such a degree that each of them produces an independent commodity."*

The economic structure of society, and the level of development of social production, science and engineering related thereto are of overriding significance to the structure of industrial production. The structure and dimensions of the natural resources, their territorial distribution, the degree to which they have been investigated and their accessibility, as well as the situation in foreign politics, and the nature and scale of the foreign economic relations of the given country, exercise a significant influence upon the relationship of branches of industry.

In a socialist economy, the rates of development of individual branches of industry are established not spontaneously, as under capitalism, but in planned fashion, in relation to the problems faced by the national economy at a given stage of its development. The Party and the government determine, on the basis of analysis of the demands of the economic laws of socialism, the direction and rates of development of the major branches of industry, and in so doing provide for change in the structure of industrial production.

The basic characteristics of the branch-wise structure of socialist industry are:

a) preferential development of heavy industry, which assures technological progress and expanded reproduction in all branches of the national economy, constant growth in the productivity of social labor and elevation of the material welfare of the working population and reinforcement of the country's defense capacity;

b) proportional development of all branches of industry on the basis of a social division of labor among the branche economic districts and the lands of the socialist camp, making for the most rational utilization of labor and natural resources, as well as of tools and instruments of labor with the object of attaining a constant growth in socialist production on the basis of the new technology.

Changes in the structure of industrial production at each stage in socialist construction are attained in accordance with the solution of the basic problems. The theses of the report by Comrade N. S. Khrushchev at the 21st Congress of the CPSU point out that all-round acceleration of the economic development of the USSR requires preferential growth of those branches of heavy industry facilitating further rapid upsurge of the national economy as a whole, and that structural changes in a number of branches of industry are subordinate to this purpose.

The control figures for the development of the national economy of the USSR for 1959-1965 envisage: high rates and the required proportions in the development of the national economy; a considerable increase in the production of ferrous and nonferrous metals for complete satisfaction of the rising requirements of the national economy; accelerated development of the chemical industry and in particular of production of artificial and synthetic fibers, plastics and other synthetics; a change in the structure of the fuel balance by favored development of the output and production of the most economical types of fuel — petroleum and gas; rapid development of the electrification of all branches of the national economy by construction chiefl of large thermal power plants; technological reconstructio of railway transport on the basis of electrification and extensive introduction of diesel haulage; a further upsweep in all branches of agriculture, making for satisfaction of the constantly rising national need for foodstuffs and agricultural raw material; and rapid development of housing construction to provide successful fulfillment of the objective, posed by party and government, of eliminating the shortage of housing for the working population.

Fundamental changes have occurred in the structure of industrial production during the years of Soviet power. In carrying out the objective of socialist industrialization of the country, the Communist Party and the Soviet governme guided themselves by the Marxist-Leninist theory of expanded socialist reproduction, and the law of priority development of Department I. The preferred growth of production of means of production has accomplished a fundament change in the relationships between group A and group B i industry, as may be seen from the following data.

While the overall rise in gross industrial production for 1913 to 1957 was by 33 times, that of production of means of production rose 74 times, and that of consumer goods 1 times. As the result of the favored rates of growth of heavy industry, the share of branches in group A in the overall industrial production of the USSR rose from 39.5% in 1928 to 70.8% in 1956, and today exceeds the share of group A in the industrial production of the USA (1955 — 60%), of Britain (1955 — 58%), and of the German Federal Republic (1955 — 66%).

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* Karl Marx, Capital, Vol. I, p. 389 (Russ. ed.), 1954.

Average Annual Rates of Growth in Gross Industrial Production Under the 5-Year Plans, in %

	1929-1932	1933-1937	1938-1940	1946-1950	1951-1955	1956	1957	1959-1965
All industry	19.2	17.1	13.2	13.6	13.2	11.0	10.0	8.6
including:								
production of means of production (group A)	28.5	19.0	15.3	12.8	13.8	11.4	11.0	9.3
production of consumer goods (group B)	11.7	14.8	10.1	15.7	12.0	9.4	8.0	7.3

Proportionality as a consideration appears in capitalist production as a factor of constant disproportionality. Marx noted: "When it is stated that not overproduction, but merely a violation of the proportions among the various branches of production, takes place, this simply means that under capitalist production, a proportional relationship among the various branches of production develops out of lack of proportion as a continuous process, as here the mutual relationships of production as a whole bind the persons participating in production in the form of a blind law and not as a law which, comprehended by their collective wisdom and thus subordinate thereto, subjects the process of production to their common control."*

Only in socialist society is there created the possibility of planned, proportioned development of the economy, and the possibility of providing the most correct relationship — that of maximum effectiveness — in the development of all the branches of the national economy as a whole, and that of industry in the first place.

During the First 5-Year Plan, when the problem of establishment of heavy industry — the foundation of the development of the entire national economy — was solved, the rate of development of the branches manufacturing means of production was over twice as high as that of branches producing consumer goods. In the Second 5-Year Plan and the first three years of the Third, the excess of rates of growth of production of means of production over the production of consumer goods was 30-50%, and presently it is 20-30%. The priority growth of heavy industry determines the high rates of development of the national economy, including those which produce consumer goods.

The resolution of the May, 1958, Plenum of the CC CPSU says: "Today heavy industry, science and engineering have attained a level at which, without harm to the further priority growth of heavy industry and the defense capability of the country, we are in a position significantly more rapidly to increase the production of consumer goods so as, in the next 5-6 years, to attain an adequate satisfaction of the needs of the population for fabrics, clothing, shoes and other commodities." Successful realization of the programs for the development of agriculture, housing and the chemical industry will assure the further growth of the material well-being and cultural level of the Soviet people (see Table on next page).

Let us examine certain questions of the development of the major branches of industry and their role in the overall structure of industrial production in the USSR.

One of the most important places in the national economy is occupied by ferrous metallurgy. Both in the years of the pre-war 5-year plans, and today, this branch is developing at high rates. During the 4th and 5th 5-year plans, the iron and steel industries destroyed during the Great Patriotic War were rebuilt, and a number of new blast furnaces and open hearths, rolling mills and other units were erected. However, from 1940 to 1955 the gross production of ferrous metallurgy rose only slightly more rapidly than that of industry as a whole. The rates of growth of that branch proved inadequate, and today the limited volume of production of the ferrous metals significantly retards the development of construction and of certain branches of the machinery industry. Today measures are underway to raise capacity in ferrous metallurgy and to increase metal output. If, in 1956, the plan for gross production under the now-dissolved Ministry of Ferrous Metallurgy was fulfilled 99.6%, in 1957 fulfillment was 107%. The overcoming of the lag in the production of ferrous metals makes possible even more rapid capital construction and a reinforced rate of development of the manufacture of machinery. In 1959-1965, about 100 billion rubles will be expended upon the construction of ferrous metallurgy enterprises. This is 2.4 times the level of capital investments in ferrous metallurgy in 1952-1958. Capital investments in the iron ore industry will rise to 2.8 times their previous level.

In order to eliminate the shortage of metals it is planned significantly to increase the output of iron ore, and the production of pig iron, steel and rolled products. Particular attention is given to the output of high-quality steels and various economical rolled shapes. For the future there is planned a new and powerful base for ferrous metallurgy in the eastern districts. Significant pig iron production capacities will go into operation there within the next 7 years.

An important role in modern industrial production is played by nonferrous metallurgy (copper, aluminum, titanium, the rare metals, and others). The following comparison testified to the significance of nonferrous metallurgy in the economies of the industrially developed countries. From 1937 to 1957 the melting of steel and the production of rolled products doubled in the United States, and that of aluminum increased 11-fold. According to the control figures, the melting of steel in the USSR in 1959-1965 will rise by 56-65%, the production of rolled products by 52-64%, and the production of aluminum by approximately 2.8 times. There will be a considerable rise in the production of nickel, magnesium, titanium, germanium, and silicon. There will also be an expansion of production of other nonferrous and, particularly, rare metals.

The role of the aluminum industry in modern industrial production is determined by the fact that aluminum is an important material in such branches of the economy as the atomics industry, the manufacture of many types of armament, the aircraft, electrical equipment industry, the construction of transportation equipment, etc. Rapid development of the aluminum industry is one of the distinctive characteristics of change in the structure of industrial production at the present stage of development of technology.

An ever-increasing role is played by a number of other nonferrous and rare metals. For example, pure titanium was not smelted before the war. Today, the development of new equipment has called forth a need for materials distinguished by high strength and resistance to abrupt changes in temperature. Titanium and its alloys possess such properties. Magnesium has a big future. In the US,

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* Karl Marx, Capital, Vol. III, p. 267, 1954 (Russ. ed.)

Rates of Growth of Gross Production of USSR Industry(*)

	Rise in production		
	1950 as % of 1940	1955 as % of 1950	1955 as % of 1940
All industry	173	185	320
including:			
ferrous metallurgy	184	179	330
nonferrous metallurgy	208	195	405
the fuel industry	144	163	235
power plants and transmission lines	187	196	366
chemical industry (including mining of chemicals)	183	228	416
machinery manufacture and metal working	215	220	466
including manufacture of machinery	234	243	571
lumbering and woodworking	132	146	192
paper	192	172	330
building materials	205	229	468
glass and the porcelain and pottery industries	197	196	386
the polygraphic industry	138	176	243
light industry	112	178	199
food industry	97	160	154

production of this metal increased at the most rapid rates of all, particularly during the war years. Many rare elements take on significance in modern equipment. All this bears witness to the fact that nonferrous metallurgy is becoming one of the basic branches of modern industry.

Significant changes are occurring in the structure of the fuel and power base of industry. The process of substitution of petroleum and natural gas for coal has been proceeding in the USA for the past 40 years. The share of coal in the total fuel output of the USA dropped from 84.2% in 1913 to 33.2% in 1955, and the share of petroleum and natural gas rose during the same period from 11.6 to 61.9%. In the USSR, starting with the 5th 5-Year plan, a turn is visible in the direction of increase in the share of oil and gas, the percentage of which has risen in the total fuel balance in the country (from 19.2% in 1950 to 23.3% in 1955). Recently, the share of oil and gas in the total production of mineral fuel has exceeded 30%.

The considerable percentage of low-calorie types of solid fuels (lignite, peat, shale and wood) and the low share of such high-calorie fuels as natural gas and petroleum remains a shortcoming in the structure of fuel recovery in the USSR, and one of the causes of strain in the fuel balance.

In recent years, the Party and government have taken a number of measures toward a fundamental improvement in the fuel balance. In this regard, major attention is given to the recovery of petroleum and gas, and also to superior utilization of coal and all other types of fuel.

Capital investments in the petroleum and gas industries alone will be 170-173 billion rubles in the forthcoming seven-year period. While, in 1946, of the total volume of fuel (converted to conventional), some 80% was coal and 20% petroleum, in the next 7 years, despite some rise in the output of coal (20-23%), the share of solid fuel in the fuel balance of the country will diminish to 43%, and the share of petroleum and gas will rise to 51%. Atomic energ will occupy a significant place in the fuel-and-power balanc The accelerated growth of the gas and petroleum industry will make it possible in the briefest period of time and wit minimum expenditures of labor and material means, completely to satisfy the requirements of the national economy for high quality fuel.

Electricity is the power base of modern industry. Rapid growth in electric power production is a characteristic feature of change in the structure of modern industrial production. Increase in available electric power is one of the major sources for increase in labor productivity. During the Soviet years the production of electricity in our countr has risen more than 100-fold, while industrial production as a whole has risen 33-fold. However, despite the rapid rates of development of the electric power industry, the production of electric power is not yet running ahead of the output of industry as a whole. The experience of industrially highly-developed countries bears witness to the fac that under contemporary conditions of technological progre the development of industry requires that electric power production grow more rapidly than the rest.

Rates of Growth of Output of Various Fuels in the USSR, 1956-1958

	1956 as % of 1955	1957 as % of 1956	1958 (9 mos.) as % of 1957 (9 mos.)
Coal	110	108	108
Petroleum	118	117	116
Gas	132	148	157

Average Annual Rates of Rise in Industrial Production and Output of Electric Power 1950-1955 (%)*

	Industrial production	Electric power
USSR	13.3	13.3
USA	4.2	10.0
England	3.4	7.1
France	6.3	8.5

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* See Promyshlennost' SSSR (USSR Industry), A Statistical Handbook, Gosstatizdat, 1957, pp. 35-38.

* Strany sotsializma i kapitalizma v tsifrakh (The Lands of So ism and Capitalism in Figures), Gospolitizdat, 1957, pp. 54, 5

As is evident from the table, the rates of growth in electric power output in the USSR in 1950-1955 were at the same level as the rates of growth of industrial production. At the same time, in the USA, England and France, the rates of increase in electric power production substantially exceeded the rates of growth of industry as a whole.

In 1965, the output of electric power in the USSR will rise to 500-520 billion kwh and will exceed the level of 1958 by a factor of 2-2.2.

The rise in electric power output in the USA in the postwar years was considerably facilitated by structural changes in industry and the appearance of a number of new branches. From 1948 to 1956, growth in the consumption of electric power by the processing industries was relatively low (50%). At the same time, consumption of electricity by the rapidly developing aluminum industry rose almost 3-fold, while so new a branch as the atomics industry already made use of 10% of all the electric power consumed in the country, in 1955, as against 0.8% in 1950.*

Postwar scientific discoveries in chemistry have transformed the chemical industry into one of the leading branches of the national economy. The accelerated development of chemical production has a significant influence upon change in the structure of industry as a whole. With an overall rise in industrial production in the USSR of 3.9 times in 1957 over 1940, the chemical industry grew 5-fold. However, even though the chemical industry of the USSR runs ahead of industrial production as a whole in its rate of development, this lead was relatively small until recently.

The development of the chemical industry, and in particular of its newest branches, based on organic synthesis, makes for expansion of the raw materials supply for the processing branches of industry and permits production of products exceeding in quality products made of natural materials. Moreover, it yields an enormous saving in social labor. It has, for example, been calculated that almost 100 times more labor is expended upon one ton of natural silk than upon a ton of artificial silk.

The production of artificial fibers in the USSR began during the 1st 5-Year Plan. In 1937 its production attained 8,600 tons, and in 1956 129,000 tons. From 1937 to 1956 the volume of output of artificial fiber rose 15 times in the USSR, 4.5 times in the US, over 3-fold in England and France, and 80% in Japan. Despite the high rates of growth, the USSR still lags the USA, England and the German Federal Republic in the volume of output of synthetic fiber, and particularly of the modern, most economical and high-quality types.

As chemistry and engineering advance, synthetics occupy an ever-larger place in industry, tending to drive out natural raw materials. Rubber may serve as an example of this.

Prior to the war, there was no industrial production of synthetic rubber in the USA. Its industries used only natural rubber imported from abroad. Today over half the rubber employed in the USA is synthetic.

The impetuous development of new branches of the chemical industry rests on expansion of the production of such basic chemical products as inorganic acids, soda, etc. The production of sulfuric acid and of sodium carbonate in the USSR in 1957 exceeded the level of 1940 three-fold, and that of mineral fertilizers by 3.7 times. The output of these products is also rising in the capitalist countries. In 1937 the USA produced 4.5 million tons of sulfuric acid, and in 1957 its output was 14.7 million. As compared with 1937, the production of nitric, phosphate and potassium fertilizers in the USA has risen several times.

The rising significance of chemistry in modern industrial production gives rise to the need for accelerated rates of increase in all branches of the chemical industry. Realization of the program outlined by the May, 1958, Plenum of the CC CPSU for the development of the chemical industry will make it possible for our country to progress to a new stage of technological progress and to satisfy the rising needs of the Soviet people better and more completely.

In connection with the accelerated development of the chemical industry, major changes are occurring in the structure of industrial production. Presently, the Soviet Union is in second place in the world in chemical production. In its rates of development, the chemical industry of our country is ahead of the industrially mature capitalist countries. The gross output of the branches of the chemical industry rose 7 times in the USSR from 1937 to 1956, 4.1 times in the USA, 3 times in England, 2.3 times in France, and 2.1 times in the German Federal Republic. In the years immediately ahead an increase in output capacity for artificial and synthetic fibers of 4.6 times is envisaged, one of 8 times in the production of plastics and synthetic resins, and 3.4 times in the production of synthetic rubber. The control figures envisage virtually a 3-fold growth in the total volume of production of the chemical industry in 1959-1965, including: 12-14 times in synthetic fibers, and 6.7 times in plastics and synthetic resins. A further rise in the chemical industry and the sharp rise in the manufacture of chemical products will have a significant effect upon the structure of the consumption of metal, wood, cotton, potatoes and other types of raw materials. The development of the chemical industries poses grandiose objectives before the construction and machinery industries. During 1959-1965 it is planned to build and rebuild 257 enterprises in the chemical and related industries, to raise the output of chemical, technological and auxiliary equipment by more than 3 times, and that of steel reinforcing bars by 8-9 times. A significant expansion of the production base of the enterprises in the chemical machinery industries is ahead.

The rapid growth of a new, major branch of industry — atomics — is having a major effect on the change in the structure of industry. Soviet science has made a significant contribution to the development of atomic power production. The world's first atomic power plant is functioning in the USSR since 1954. In 1958, the first unit of a new atomic power plant went into operation. Atomic energy is also employed in medicine and industry.

Soviet scientists and engineers are now working with success on the development of equipment for powerful atomic power plants. The problem of utilization of atomic energy in transportation is in process of solution. The world's first atomic icebreaker is under construction in the Soviet Union.

Further successes in the study of the atomic nucleus and the solution of the problem of control of thermonuclear reactions will give rise to a truly revolutionary change in power production and will have a vast effect on the structure of industry.

The role of the machinery manufacturing and the metalworking industries in the national economy is great.

With an overall 3.2-fold rise in industry in 1940-1955, the output of the machinery industry rose by 5.7 times. Significant changes in the structure of machinery manufacture occurred. In connection with the needs of the developing power industry, there was a rapid rise in the production of power and power engineering equipment. Thus, the production of steam turbines rose more than 4-fold, and that of hydraulic turbines by more than 7 times.

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* See Voprosy geografii (Problems of Geography), Issue 41, 1957, p. 103.

Mechanization and automation of production give rise to the need for mass production of instruments of control and monitoring. Therefore instrument manufacturing, the electrical engineering and radio engineering branches are growing considerably more rapidly than machinery manufacture as a whole.

An important factor in the further development of automation is electronics, which plays a decisive role in automatic control systems. New possibilities for the development of electronics are opening up in connection with the utilization of transistor equipment in industry. Our industry has successfully mastered the production of many types of selenium rectifiers. Diodes and triodes have begun to replace tubes. Utilization of semiconductors permits significant simplification of the design of electronic equipments and an increase in the reliability of their operation. Electronic equipment is the foundation of the production of calculating and computing machines, which make possible the automation not only of processes of production but managerial labor.

An automotive industry was established in our country in the pre-war years. Mass, serial production, the broad utilization of high-capacity equipment and of modern engineering moved the Soviet automotive industry into the front ranks of branches of the machinery industry. However, the development of automotive manufacture then slowed somewhat. In 1957 automotive production was 3.4 times as high as in 1940 (the increase in the gross output of industry as a whole being 3.9 times). Today our country is manufacturing approximately 500,000 automotive vehicles per year, and production in 1965 is scheduled at 750,000-856,000.

The production of machinery and equipment for the most important branches of heavy industry occupies an important place in the manufacture of machinery. The growth in the production of metallurgical equipment in 1940-1955 rose 7.3-fold, that of petroleum equipment 3.1 times, and that for the chemical industry by 6.5 times.

The production of metalworking machinery and equipment is rising at high rates. The output of metal-cutting machines in 1955 was double that of 1940, and that of forging presses was up 4.1 times. However, both the structure of the pool of metalworking machines and that of the manufacture of new machines still reveals serious shortcomings. The USSR manufactures a considerable number of lathes designed for removing large amounts of oversize, and comparatively fewer machines for the terminal finishing operations. Comparatively few table-model lathes for mechanization of the work of the machinist and assembly worker are made, although these are the most time-consuming.

Manufacture of modern forging and press and casting equipment is inadequate, with the result that the machine-tool pool of the USSR shows a dominance of machines for preliminary roughing operations on parts.

Analysis of the state of the pool of metalworking equipment shows that our country is as yet slow in the renewal of equipment in the leading branches of machinery manufacture. This is related, to a significant degree, to the excessive scattering of this equipment among small repair and metalworking enterprises. It suffices to say that about one-half of all metal-cutting machines and approximately the same number of the workers in the machinery industry are engaged in machine repair.

In the upcoming seven-year period, the production of the machinery manufacturing and metal-working industry will almost double. There will be a particularly rapid rise in the production of turbines (2.8-3 times), of generators and turbines (3-3.2 times), of chemical equipment (3.3-3.5 time of mainline electric and diesel locomotives (2.8-3 times), and of instruments (2.5-2.6 times).

Within 7-10 years, the Soviet Union will approximate or even exceed the level of production of the corresponding machines in the USA in certain specific major types. Thus the long-range prospects for production of machine tools in the USSR call for the output of 200,000 per year. In the US 217,000 machine tools were produced in 1953, but in the following years their output fluctuated in the 140,000-170,0 range. The production of tractors (exclusive of those for orchard and garden cultivation) will in 7 to 10 years exceed the present level of manufacture thereof in the United States.

At the beginning of 1958, about 350 automated lines of machine tools were in operation in the machinery-manufacturing enterprises of the USSR. It is proposed to manufacture more than 1,300 automated lines of machine tools in 1959-1965 for the metalworking industry (involving 12-14,000 machines) and more than 350 automated lines for the woodworking industry.

With the purpose of guaranteeing the meeting of the target for mechanization and automation of the production processes, a sharp increase is envisaged in the manufacture of instruments and means of automation, of calculating machines and analytical computers, and the expansion of the scientific research, laboratory and manufacturing facilitie of instrument manufacture, and increased efforts in designing and producing fast electronic computers for the solutio of complex mathematic problems and automation of contro of processes of production.

There will be an ever-increasing output of consumer goods, based on the priority rise in heavy industry. The light and foodstuffs industry of prerevolutionary Russia co sisted primarily of the production of small-scale craftsmen, with primitive equipment and a predominance of hand labor. During the years of Soviet power these branches of industry have been completely rebuilt and equipped with new equipment.

Considerable changes have occurred in the structure of the production of consumer goods. The branches producin high-quality commodities and products have grown at particularly rapid rates. Thus, although the total growth in gross production of light industry in 1956 over 1913 was b a factor of 10.6, the output of knitwear rose 116-fold, that of the clothing industry by 32-fold, and that of cultural an household goods by 37 times.

The rise in the share of high-quality products is also characteristic of the foodstuffs industry. While the growt in the total volume of production in this branch in 1957 wa more than 7-fold relative to 1913, that of butter and of other milk products rose more than 9-fold, that of confectionery products more than 15-fold, and that of canned go almost 40-fold.

Along with the growth in production, there was a consid able expansion in the assortment of industrial products a foodstuffs, and an improvement in their quality.

Major changes are occurring in the structure of production in light industry in the forthcoming seven-year perio The rapid rates of production of synthetics will make for the following increases in output, between 1957 and 1965, fabrics in which artificial and synthetic fibers are emplo woolens — 2.3-fold, silk — 1.75-fold, cotton — 6-fold, kni outer and underwear of synthetic and artificial fibers — m than 9-fold, socks-and-stockings 3.2-fold, artificial karai 14-fold, shoes of artificial leather 2.3-fold, and shoes employing lightweight microporous soles 40-fold.

The high rates of growth of industrial production in the

USSR are assurance of rapid development of the entire national economy, the most rapid overcoming of the lag in a number of branches of industry and the foundation of the success of the Soviet Union in the peaceful economic competition with the capitalist countries. The theses of the report by Comrade N. S. Khrushchev at the 21st Congress of the CPSU develop grandiose perspectives for the upbuilding of communism in the USSR. In the next 15 years the decisive branches of Soviet Industry will raise their production to more than 2 and 3 times its present level.

We have compiled the following table to compare the rates of growth of production of the most important branches of production in the USSR for the past 17 and for the coming 7 years:

	Unit of measurement	1940	1957	1965	1957 as % of 1940	1965 as % of 1957
Iron ore	million tons	30	84	230–245	280	273–292
Pig iron	million tons	15	37	65–70	246	176–189
Steel	million tons	18	51	86–91	274	169–188
Coal	million tons	166	463	596–609	279	129–132
Petroleum	million tons	31	98	230–240	316	235–245
Gas	billion cu. meters	3.2	20	150	662	750
Electricity	billion kwh	48	210	500–520	438	238–248
Cement	million tons	5.7	29	75–81	510	259–279
Granulated sugar	million tons	2.2	4.5	9.3–10	204	207–222
Woolen fabrics	million tons	120	282	500	235	177
Leather shoes	million pairs	211	315	515	150	164

The data adduced bear testimony to the fact that, both in the past period of development of the Soviet economy and in the future, the most rapid rates of development will be those of branches constituting the foundation of technical progress in the entire national economy. The further development of the national economy of the USSR will be accompanied by fundamental quantitative changes. Significant shifts will occur in the structure of industrial production of the USSR, in connection with the realization of problems in the accelerated development of a number of branches of heavy industry, the introduction of complex automation of production, conversion of railway transport to Diesel and electric locomotives, and in the reconstruction and replacement of basic capacities in the most important branches of the national economy.

With each new stage in the development of the national economy, greater significance is acquired by the balance method of planning as the basic method of checking the correspondence of projected plans for the development of individual branches with the requirement of the objectively operative law of planned, proportional development of the national economy and as a most important means of preventing disproportions in the development of individual branches of the economy.

The present period in the development of the Soviet economy is characterized by new technological, economic and organizational shifts. The development of the productive forces of socialist society, in which production relations create full scope for its progress, is characterized by an exceptionally rapid rise in all branches of the economy, and the development, in a brief period of time, of new branches of production and entire new industries, and, on the basis thereof, an increase in the productivity of social labor and a constant rise in the well-being of the working people.

This type of development of the productive forces conditions the expansion and complication of the relationships between branches and spheres of the national economy, and also of territorial economic complexes.

Under the new conditions of management of industry and construction, there is an immeasurable increase in the role of profound analysis of vast quantities of factual data both in the various branches of production and by economic districts. In this connection, the production of computers and mathematical machines will, in the upcoming seven-year period, rise by 4.5-4.7 times.

Under conditions in which planning is from below, and millions of rank-and-file working people take direct part therein, it is necessary to use electronic computers in economic and planning calculations. These machines, making thousands of calculations per second, are capable of making the choice of the most efficient variants of the plan. Under these conditions, consideration of literally all relationships among branches of production arising in the process of expanded socialist reproduction are possible, and not only of those directly reflected in the material balances. This assures the choice of those variants of the plan and the establishment of those proportions corresponding most closely to progressive tendencies of economic and technical development. The USSR State Planning Commission and the Central Statistical Administration of the USSR will have to elaborate measures for the broad utilization of modern computer technology for economic calculations.

Heavy industry plays a decisive role in the development of the national economy of the Soviet Union. The general line of the Communist Party for priority development of heavy industry is not and will not be forgotten. The correctness of this line is confirmed by the full course of history. The high rates of development of the heavy industry of the USSR make for uninterrupted technical progress, for further reinforcement of the economic power and defense capacity of the Soviet Union, and for systematic and rapid growth in the material welfare of the Soviet people.

B. Gladtsinov:

Significance of Pipeline Transportation Development to the National Economy

The theses of the report by Comrade N. S. Khrushchev at the 21st Congress of the CPSU, *Control Figures for the Development of the National Economy of the USSR 1959-1965*, mark a distinctive change in the structure of the fuel balance by broad development of the recovery and production of highly economical types of fuel: petroleum and gas. As early as 1965 it is planned to bring the annual output of petroleum to 230-240 million tons, and that of gas to 150 billion cubic meters. In the coming 15 years it is proposed to bring petroleum output up to 350-400 million tons, and that of gas to 270-320 billion cubic meters per year.

Resources of petroleum and natural gas are not to be found in all portions of the USSR. In this connection the volume of oil and gas to be transported is quite considerable. Pipelines are called upon to play a particularly important role in assuring the transportation of petroleum, oil products and gas over long distances.

Pipelines, being one of the most economical and progressive types of transportation, have in recent years come into increasingly wide use both in the USSR and abroad. This is to be explained primarily by the fact that pipelines have substantial advantages over other types of transport. The process of pipeline transportation will make it possible to assure a higher degree of sealing and thus considerably to reduce the losses of crude or of petroleum products being pumped. Pipelines permit attainment of the maximum degree of mechanization and automation of the transport process, and this makes it possible to achieve a reduction in the number of service personnel and consequently a reduction in cost. The distance between point of origin and point of destination by pipeline is usually shorter than by any other form of transportation, and this makes it possible to reduce the volume of transportation. Pipelines are capable of functioning the year round, and in virtually any climatic conditions. As a result, in the transportation of significant quantities of petroleum, oil products and gas over long distances, pipelines prove to be among the cheapest forms of transportation. The somewhat elevated capital investments in certain types of pipelines are recouped very quickly thanks to low operating expenses.

The following must be borne in mind in examining the prospects for development of pipeline transport. Although pipelines constitute virtually the only means of transporting gas, and their presence determines the development of the gas industry to a considerable degree, where petroleum and its products are concerned, the expansion of this type of transportation at present serves primarily to take the burden off railway transport and to reduce transport costs.

The pipeline system of pre-revolutionary Russia was insignificant. The total length of major pipeline arteries for petroleum transport in 1917 came to about 1200 km. The construction of new, major pipelines on a large scale began only after the Great October Socialist Revolution, particularly in the period of execution of the 5-Year Plans for the development of the national economy. As of 1956 the total length of pipelines in operation for the pumping of crude and its products was 11,000 km. In the past 15 years, the construction of oil lines has been concentrated mainly in the new petroleum districts: the Bashkir and Tatar Autonomous republics, and along the Volga (including the Emba region). As of 1958 about 8,000 km had been built here, or 90% of all the petroleum pipelines built during that period.

One of the most important problems in the development of petroleum pipeline transportation is continuous supply of raw materials to the largest refineries. As early as 1956 more than half the refineries in operation (almost 3/4, if measured in capacity) were joined by pipeline to the corresponding large oilfields. To supply the Ufa, Kuibyshev, Saratov and other refineries with oil, the Bavly-Kuibyshev, Romashkino-Kuibyshev-Saratov, Zolny-Syzran, Yablonovy-Syzran, Tuimaza-Ufa and other pipelines were built. This made it possible to free a considerable volume of rolling stock and to create reserve haulage capacities on the main rail lines. The existing system of major pipelines made it possible, in terms of the actual volume of transport thereby, in 1957 to reduce railway turnover by approximately 30 billion ton-kilometers, or in other words by 35% of the total load on the railroads in terms of petrole and those light fractions which are transported by pipeline, and also to reduce the costs of transportation.

However, despite the creation of a number of new major oil pipelines, the scale on which this form of transportation has been developing until very recently did not correspond to the rates of growth of the petroleum industry and the consumption of petroleum products. In 1957 the share of pipelines in the transportation of petroleum and its produc by all forms of transport constituted: in volume (tons) — 35.4%, and in traffic (ton-kilometers) only 12.5%. Petroleu products are still hauled chiefly by rail, and there are long irrational oil hauls by rail, which are very expensive. Thu according to the data of the Railway Ministry, transport costs for hauling petroleum and its production to the Far East in 1955 came to about 900,000,000 rubles. The lag in the development of pipeline transport was also reflected in the mean length of railway haulage, which increased, in recent years, chiefly by increases in haulage of petroleum products to Siberia, Kazakhstan and other districts.

Reduction in the average length of haul of petroleum pro ucts, along with the increase in speeds, plays a major role because in connection with the rising volume of transporta tion of petroleum products, a large volume of petroleum and petroleum products is constantly in motion. In 1955, the average volume of petroleum freight in motion on the railroads at any single time was 1,200,000 tons, its cost being approximately 500,000,000 rubles.

Serious shortcomings also existed in the planning of pipelin construction. Thus, in 1947-1954 three 12-inch to 14-inch lin were laid along the Tuimaza-Bavly route, while it would have been more desirable to build 1 or 2 lines of larger diameter. the Tuimaza-Ufa lines two 14-inch and two 20-inch lines wer built during this same period, and it would have been more economical to lay two of larger diameter. Moreover, the available network of pipelines was not always in full operation. In 1957 petroleum pipelines were used, on the average, to 70-80% of their planned capacity, and some, such as the Zolny-Kryazh, the Karskaya-Novorossiisk, and the Okha-Komsomolsk to not more than 50% thereof.

In order to determine the economic efficiency of pipelines, let us compare their prime indices with analogous indices for our forms of transportation. The cost of transporting freight is one of the most important economic indices for all forms of transport. In accordance with the final data of Glavneftesbyt, the mean cost of pumping petroleum products per ton-kilometer along the major oil pipelines in operation in 1957 was 1.3 kopeks. For the individual lines, the cost fluctuated, in accordance with degree of utilization, capacity and purpose from 0.6 to 5 kopeks per ton-kilometer. The pumping cost on the new pipelines in the East and along the Volga is 0.6-0.9 kopeks per ton-kilometer, and may be reduced as the planned capacity of these pipelines is mastered further.

The real cost of pipeline pumping is high relative to the planners' calculations. One of the reasons for this is the incomplete utilization of the planned capacities of certain pipelines due to delays in construction and launching of pumping stations. According to calculated data, if all the pumping stations set forth in the plans and needed for the full utilization of the capacity of the pipelines in 1958 were in operation, their haulage could be raised by approximately 25-30%, or by 8-10 billion ton-kilometers.

Lack of coordination with other forms of transportation, specifically the railroads, also has a negative effect on the functioning of certain pipelines. By way of example, let us cite facts for the pipelines of the Bashkir Pipeline Management. Thus, inadequate provision of tank cars to the loading points of local pipelines caused them to stand idle for about 1200 hours in the last 9 months of 1958. While the refined product lines were operating at less than full capacity, through freights with light refinery products that could have been transported by pipeline at lower cost were moving parallel to them along the Ufa and South Urals railways, eastward. Nevertheless, the real cost of petroleum transportation by pipeline is already lower than by other means of transportation. Thus, the mean cost of haulage of petroleum products in 1956-1957 was 1.6 kopek per ton-kilometer by sea, 1.5 by river, and 1 on the vessels of the Volgotanker line. By rail the average cost of oil haulage has been calculated at 3.4-3.7 kopeks per ton-kilometer.

No less important an economic index of the efficiency of pipelines is that of capital investments. According to calculations, capital investments in major pipelines come to an average of 300-650,000 rubles per km, or 4-10 kopeks per ton-kilometer. For railway transport the cost of one kilometer of new line (including rolling stock) is 1-2 million rubles, depending upon topography and other factors. For truck transport the standard capital investment per km of road (including the motor pool) is 0.8-1.5 million rubles. Consequently, capital investments in railway and automotive transport are higher than by pipeline. However, as distinct from pipelines, both these forms of transportation are not confined only to petroleum freights. Therefore, in comparing them to pipelines it is necessary to consider not the total capital investment, but only a specific portion thereof, in accordance with the share of petroleum products in the total freight turnover of the particular road. According to the Central Scientific Research Institute of Railway Transport, capital investments in railway oil haulage (including those for increasing carrying capacity and rolling stock) come to 7.3-8 kopeks per ton-kilometer. According to other data, average capital investments (without breakdown into individual categories of freight) come to 12.7 kopeks per ton-kilometer. With regard to river transport, capital investments are calculated to average 7.1 kopeks for the USSR, for all freights, and 7.8-8.8 kopeks per tkm for petroleum freights. Thus, capital investments in pipeline transportation are no greater than in other forms of transport. For large-diameter pipelines (24-inch and more), this figure is considerably lower than for railway and river transport. In cases where capital investments in pipeline transport are higher than in other types, they are rapidly paid off due to the lower operating expenses.

Comparison of average standards of metal consumption yields an approximately similar picture. Thus, if the mean expenditures of metal for pipelines come to 80-130 tons per km, or 10-40 grams per tkm, in the transportation of oil by railway, both calculations and factual data show the expenditures of metal for rolling stock to come to 11-13 grams per tkm, and 10-20 grams more per tkm for right of way.

Pipelines also are superior to other types of transportation in economies in social labor, thanks to the high degree of automation and mechanization, and also in expenditures of electric power and fuel. Pumping of petroleum products through pipelines yields an extra effect due to reduction in losses of the freights being transported. They are about 50% lower than by rail or by river transport. In real terms, the savings of losses come to about 5-10 kg per ton of petroleum freights transported.

Thus, all the major economic indices show pipelines to enjoy significant advantages over railway transport, and this is decisive in determining the development of the various forms of petroleum product transportation during the next 10 to 15 years.

In 1957, the share of railway transport in the total shipments of petroleum freights by all forms of transportation came to 44% of the shipments in tons, and 62% of the turnover in ton-kilometers. This heavy loading of the railways with petroleum freights cannot be regarded as rational in terms of the national economy, as it makes for an increase in transport costs, an elevated consumption of fuel, etc.

In accordance with the theses of the report by Comrade N. S. Khrushchev, the recovery of petroleum in 1965 will, by comparison with 1958, rise by two-fold or more, and an increase by a factor of 3.5-4 times is envisaged over the next 15 years. The volume of haulage of petroleum and oil products is envisaged as increasing by about the same amount. In this connection, the question of choice of a more efficient variant of organization of transportation of petroleum freights arises, as the percentage thereof in the total freight turnover of the country will, by approximated calculations, come to about 8-10%.

The target figures for the development of the USSR national economy for 1959-1965 envisage the erection of new refineries in Siberia, Uzbekistan, the Ukrainian and Belorussian constituent republics, and in the central and northwestern regions of the RSFSR. The recovery of petroleum is also to rise in a number of these districts, but not to a degree that will completely meet the capacities of all the plants being built. They will be supplied with petroleum to a considerable degree from districts of the Urals, the Volga, the Bashkir ASSR and the North Caucasus. Transportation of petroleum from these districts to the plants (primarily latitudinally and for long distances) can be either by railroad or by pipeline.

Greater capital investments would be required to meet the rising volume of petroleum haulage on existing rail lines and by the building of new lines in some cases than would be needed to lay new main pipelines. This may be demonstrated as follows. In connection with the rising flow of petroleum and petroleum product freights in the next 10 years it is deemed desirable to lay a major line for refinery products from Omsk to Chita. However, if the added loads of petroleum and refinery products, which come to 20-30 million tons per year along certain directions in Siberia, were carried by rail, it would be necessary to build new lines or increase the carrying capacity of the existing ones. The total capital investments would be 6-7 billion rubles in both cases.

The efficiency of the utilization of small diameter pipelines, as compared with rail haulage for short distances, is essentially due to the lower operating costs and the absence of added capital expenditures for sidings, filling and discharging equipment, etc.

The considerations and comparative technological and economic indices presented above make it possible to draw the following conclusions as to the areas in which pipelines may be employed to transport petroleum and petroleum products. The main type of transport to assure planned and uninterrupted delivery of petroleum at relatively low operating expenditures for the supply of large capacity oil refineries, must be mainline pipelines. Where small refineries are concerned, located at a long distance from their supply of crude, the laying of small-diameter pipelines will hardly be efficient relative to railways and other forms of transportation. In districts where large shipments of light products are envisaged (2 million tons and more in each direction) and where the railways are highly overloaded, it is desirable to build major lines for refined products, with branches. When the consumption of light products is concentrated in individual small districts not far from the main lines, additional branch lines will be needed.

Development of a network of lines to carry refinery products is particularly important for the eastern part of the USSR in view of the high loading and inadequate network of railroads, and also due to the rapid growth and concentration of consumers of light oil products in particular districts of Siberia, Kazakhstan and the Far East.

River transport cannot be regarded as one of the major forms of transport in the haulage of petroleum products, and particularly in carrying crude petroleum, in view of the seasonal nature of its operations, the geographical location of the major navigable river basins, and a number of technical factors. However, in the future river transport will play no small role in the transportation of heavy oil, lubricants and other petroleum products, particularly in the regions along the Volga, and in Siberia.

Truck transport is also incapable of competing with the pipelines. Truck haulage of petroleum is limited primarily to short-distance shipment of small quantities of light and other petroleum products — to state farms, Repair and Equipment Stations, collective farms, individual enterprises and small tank farms at long distances from railways and major pipelines.

We know that the development of the pipeline system has in the last few years lagged behind the rates of growth of the petroleum industry. In connection with the planned broad development of petroleum recovery and processing, and the rise in the consumption of petroleum products, the pipeline system is to undergo a pronounced rise in the next few years. The target figures for the development of the national economy of the USSR in 1959-1965 envisage almost a tripling of mainline pipeline length, while the turnover of pipeline transportation is to rise by a factor of approximately 5.6.

According to calculations we have made in the Institute of Complex Transportation Problems of the USSR Academy of Sciences in company with I. G. Mel'nikova, engineer, the pipeline system should be increased by 45-50,000 km in the years 1959-1970, including 25-30,000 km of petroleum lines and 20-25,000 km of lines to carry refinery products. These pipelines will make it possible to transport about 250-280,000,000 tons of petroleum and petroleum products per year. The total turnover of the entire system of pipelines, with the assumption that they will be completely loaded will, in 1970, in accordance with the calculations made, attain approximately 350,000,000,000 tkm, while the share thereof in the overall turnover of all types of transportation (employed in hauling petroleum products) will ris to 40%. These pipelines will be able to free the railroads of about 225-250,000,000,000 tkm of crude and product load per year. Shifting this volume of haulage from the railways to the pipelines will make it possible to cut transport costs by an average of not less than 2 kopeks per tkm.

New mainline pipelines should connect refineries in Siberia, Central Asia, the Ukraine and Belorussia, and in the central and other regions of the RSFSR with the oil-producing districts of Bashkiria, Tataria, the Volga and elsewhere. They will connect the major seaports and certain railways border points at which oil is exported, to these districts. It is desirable that new mainline refinery product pipelines be laid from the very largest refineries to the major districts of consumption of light petroleum products in Siberia, Central Asia, the Ukraine, Belorussia and a number of regions of the RSFSR. The development of the system of pipelines in these districts of the USSR is the more desirable in that, along some lines, the railroads are very heavily loaded, and further addition of petroleum freights would require considerable capital investments.

Gas pipelines are virtually the only practical means of transporting natural or manufactured gas for short or long distances.

Inasmuch as the utilization of gas as a fuel and chemical raw material depends today primarily upon the possibility of transporting it along gas pipelines to the point of consumption, there are special factors involved in considering the efficiency thereof. Gas lines cannot be compared or measured against other forms of transportation, yet the efficiency of the utilization thereof may be evaluated in terms of the efficiency of the utilization of gas.

In terms of design, gas pipelines differ little from petroleum lines. A special feature of gas pipelines is the fact that compressor stations are used instead of pumping stations. Another special feature of gas pipelines is the fact that they have to be of larger diameter than oil lines. The transportation of significant amounts of gas through pipelines for long distances yields significant savings, these being due, in the first instance, to the technical and economic advantages of gas, which is a valuable raw material and fuel.

The cost of natural gas, including the expenditures upon shipment thereof for distances of up to 2,000 km, is only a fraction of that of the majority of other types of fuel (recalculated as conventional fuel). This is of particular importance in comparing gas with coal.

According to the calculations of the VNIIGAZ and other offices, utilization of about 100,000,000,000 cubic meters of natural gas instead of coal in the European portion of th USSR in 1965 would save about ten billion rubles in operat costs (including transport costs), and about 50,000,000,000 rubles for the full period 1959-1965. Under these conditio there would be a substantial diminution in the capital inve ments required to develop the production of gas instead of coal. For 1959-1965 this saving might come to over 20,000,000,000 rubles. Moreover, it should be borne in mind that with development of the recovery and utilization of natural gas instead of solid fuel, a considerable saving in expenditures of labor and in the haulage of fuel by rail and water would be made.

Broad utilization of gas will have major significance not only for rationalization of the fuel balance and the reduction of costs in production of fuel and electric power, but also for the development of the chemical industry. Natural, as well as by-product petroleum gas is a most valuable raw material for the production of plastics, artificial fiber, ammonia, nitrogen fertilizers, alcohols, acetylenes and other chemical products. The utilization of gas as a raw material in the chemical industry makes possible an improvement in the economic and engineering indices of a number of branches of production in this field, and permits us to refrain from utilization of certain types of raw materials having food value, and thus to increase the resources thereof for human consumption. The theses of Comrade N. S. Khrushchev's report at the 21st Congress of the CPSU outline broad development of the synthetic materials industry on the basis of utilization of by-product (petroleum) and natural gases, and this should yield considerable savings in capital investments.

The greater efficiency attainable by utilization of gas as fuel rather than coal in various branches of the national economy may be illustrated by a number of examples. As the network of mainline gas lines has increased, it has been possible to convert a number of major power plants to the use of gas. The results have been most impressive. Calculations show that in 1958 the consumption of natural gas, to a volume of about 3,300,000,000 cubic meters, in 1958 will make it possible to replace the utilization of about 5,000,000 tons of mineral coal, thus saving about 500,000,000 rubles per year. Utilization of gas instead of coal will sharply cut fuel consumption, particularly by raising the efficiency of boiler assemblies. Thus, utilization of this amount of gas at the power plants of the Ukrainian SSR would, in 1958, have yielded a saving of about 800,000 tons of conventional fuel units. The cost of 1 kwh of electric energy when an electric power plant is converted from coal to gas (the fuel being calculated in terms of cost) is cut by more than half.

The launching of operations on the Karadag-Akstafa-Tbilisi and Akstafa-Yerevan gas pipeline will make it possible to do without about 3,000,000 tons of long-haul coal and to reduce railway haulage by almost 3,000,000,000 tkm. Increased consumption of gas in the large cities and industrial centers would yield no less pronounced an effect. Thus, the launching of operations of both pipes of the Stavropol-Moscow gas line will raise the share of gas in the fuel consumption of the capital from 16.5% in 1955 to 84.5% in 1960, and will make possible a reduction of about 5,500,000 tons of coal and firewood haulage (calculated as conventional fuel).

The first gas line for transmission of natural gas was 160 km long, and was laid from Pokhvistnev to Kuibyshev in 1941-43. The building of major gas lines in the USSR began to develop in the postwar years (the first arterial gas line from Saratov to Moscow was built during the Great Patriotic War, and operation was begun in 1946). By 1958 the total length of operating arterial gas pipelines was 9,500 km.

In the resolution of the CC CPSU and the USSR Council of Ministers on the further development of the Soviet gas industry and in the theses of the report of Comrade N. S. Khrushchev at the 21st Congress of the CPSU, a considerable expansion of the system of gas pipelines is envisaged for the next few years. From 1959 to 1965, arterial gas lines of a total length of 26,000 km are to be built, and this will make possible a considerable increase in the number of centers of population with gas supply. Thus, whereas in 1956 gas was supplied to 99 cities and points of habitation, by 1965 about 500 towns and other communities will be provided therewith.

About 40 arterial gas pipelines are to be built in 1959-1965 in connection with the starting of exploitation of the major gas occurrences in various districts of the USSR and the need to provide gas to many towns and enterprises of the RSFSR, the Ukraine, the Belorussian SSR, the Trans-Caucasus, the Central Asian and Baltic Republics.

Realization of the plan for construction of new pipelines outlined by the target figures for development of the national economy in 1959-1965 will require, in the first place, expansion of the existing, and construction of new, tube mills. We know that the level of production of tubes, particularly of large-diameter tubes, has, until recently, inhibited the development of pipeline transport. The large amount of metal consumed in laying pipelines, particularly for production of thick-walled tubing, has been due in considerable part to the imperfect technology of tube production and the manufacture thereof of inferior metal with a low yield point.

60-70% of the cost of laying a pipeline is the cost of the line itself (the piping), and therefore the major attention should go to reducing expenditures specifically for this equipment. One of the measures directed toward the achievement of this objective is the manufacture of tubes with walls of reduced thickness so as to lay them in accord with the distribution of the pressure of the liquid or gas being pumped through the pipe. The efficiency of this measure may be indicated as follows. With the total weight of the pipes laid in the first line of the 28-inch gas artery from Stavropol to Moscow being about 240,000 tons, a reduction of only 1 mm in the thickness of the tube walls would have yielded 20-22,000 tons of saving of metal, and this is enough to produce another 130-135 km of tubing of the same diameter.

The production of long pipe sections (18-24 meters), already practiced abroad, would also lead to a reduction in construction expenditures by reducing the volume of welding. Of major importance in reducing the cost of pipeline production is reduction in the time required for it. Data on the time required for line construction of pipelines in the USSR testifies to the fact that up to 1955 an average of 0.6-1.2 km of line was laid per day. In 1955-1956 the rate of installation rose, and 5 km was laid per day during the construction of the Stavropol-Moscow pipeline. Abroad, pipeline construction usually runs at from 2.5 to 5.5 km per day, sometimes attaining 14-15 km in 24 hours.

More efficient utilization of the pipelines under construction makes it quite important to provide that the pumping (or compressor) stations be built on time. The following example (calculated by S. S. Popov) will illustrate this. When a 20-inch, 800 km oil line costing 300,000,000 rubles is built, and only one pumping station is built (at the start of the line), the annual capacity is about 2,200,000 tons. Construction of 7 intermediate pumping stations costing 105,000,000 rubles raises the annual capacity of the pipeline by 5,300,000 tons. Per million tons of annual capacity, metal requirement is as follows: 41,000 tons with one pumping station, and 12,000 tons with eight stations. Reduction in the capacity of the line by 5,300,000 tons in this instance is equal to reduction in freight turnover by 4,000,000,000 tkm. On a railway this would mean a 120,000,000 ruble annual excess expenditure for operating costs.

The efficiency of pipeline transport is also increased by the use of tubes of larger diameter. Thus, to transport 15-18,000,000 tons of oil per year requires 17-20 pipelines to be laid if 8-inch tubing is employed. If 28-inch pipe is used, only a single 1,000 km line is used, and the saving comes to 450,000 tons of metal.

The following data, provided by Ukrgiprogaz, indicate the variations in technical and economic indices for gas lines in accordance with tube diameter:

Tube diameter; (Approx.) inches	Capacity (%)	Metal requirement, weight, (%)	Capital investment (%)
12	100	100	100
16	211	178	130
20	395	278	182
24	627	400	235
28	945	543	275
32	1,345	712	305
36	1,845	900	363

As may be seen from the table, with change in tube diameter the capacity of a gas line rises considerably more rapidly than the expenditures upon metal and capital investment. In converting to the construction of large diameter oil lines, it is necessary to set up serial production of powerful pumps of 2,500-3,500 cubic meters hourly capacity. Another way of reducing the cost of tubes is by making them of asbestos-cement materials, plastics and other nonmetallic substances.

Until most recently, the importance to the national economy of the development of pipeline transport was underestimated, and this had a negative effect on the work of other types of transportation, particularly the railways. The extensive development of the petroleum and gas industry envisaged for the years immediately ahead is intimately interrelated with expansion of the system of pipeline transport, which is capable of assuring raw material supply as well as delivery of gas and petroleum refinery products to the consumer with maximum efficiency.

When examined in terms of the problem of development of various branches of the national economy, the role of railway transport takes on particular importance. An increase in the possibilities for expansion of turnover on the railways by reducing the volume of petroleum, coal and wood haulage will facilitate a rise in the national economy.

Significant for successful development of pipeline transport is the execution of a number of technical and organizational measures. Thus, the efficiency of the utilization of pipelines is significantly dependent upon the degree to which the instruments required for extensive introduction of automation and telemechanics and the operation of pipelines an control of the pumping process are provided. However, in terms of the degree to which they are equipped with moder equipment for control and measurement, our pipelines lag behind those abroad. Our instrument manufacturing industr must eliminate this lag in the briefest period.

In connection with the suggested extensive utilization of large diameter rubing (30-inch and more), it is necessary to s up the manufacture of more powerful compressors, which would assure efficient utilization of pipelines of larger diameter.

Of no less importance is the solution of certain organizational problems.

As we know, the gas pipeline system is now under the Ga Administration of the USSR Council of Ministers. It is this body, too, which carries out the construction of all new mainline pipelines. The network of petroleum pipelines is primarily under the Chief Oil Supply administrations of the State Planning Commissions of the constituent republics. This organizational control over the oil pipelines, and the inclusion thereof in the systems controlled by marketing organizations does not stimulate their development. It cannot but be noted that pipelines, as transport enterprises, a in no way related to petroleum dumps and do not perform functions of supply. Oil pipelines, like gas pipelines and other forms of transportation, require their own managem for production and technology. The present situation make to a considerable degree, for the lag in the field of introdu tion of new technology and automation in pipeline matters, for an absence of the much-needed coordination of the wor of pipeline and railway and other forms of transportation,

Of particular importance to the development of pipeline transport would be the establishment of a special scientifi research institute for problems of transportation and stora of petroleum and gas. Today, work in this field is scattere among a number of colleges and research institutes, and t required coordination and linkage is lacking. However, it obvious that pipeline transport, which plays an increasing role in our country, must have an appropriate base in scie tific research and experimentation in order to enable a se of major studies of immediate importance to be carried ou in increasing the automation of the process of transportation, introducing new methods of operation, struggle again losses, economy of metal, etc.

Rational development of a unified transport system for t USSR in the future would be unthinkable without broad development of pipeline transport. An increase in the share of pipelines in the total freight turnover would significantl reduce transport costs and thus make it possible to reduc the cost of production in the national economy of the USSR

P. Golubkov and V. Ovchinnikova:

Indivisible Funds of the Collective Farms, Cooperation Among Collective Farms in Matters of Production

Much attention is given to problems of further development of agricultural production in the theses of Comrade N. S. Khrushchev's report at the 21st Congress of the CPSU. They pose problems of exceptional importance having to do with the improvement of socialist relationships of production and determination of the direction in which the cooperative forms of property of the collective farms will develop.

The theses state that the development of agriculture will be accompanied by the perfection of socialist relationships of production and the approximation of two forms of socialist property: the collective farm and the general social. This will be manifested in the further development of the collective farm system, the growth of the productive equipment, increase in the indivisible funds of the collective farms and the correct utilization thereof, the expansion of inter-collective farm ties in production along the lines of joint organization of industrial, construction and other economic enterprises, the joint building of power plants, roads, irrigation and drainage systems, enterprises for the processing and storage of agricultural produce, schools particularly of the boarding type, homes for the aged, hospitals and clubs.

As collective farm production was developed, under conditions in which collective farms became major economic units equipped with advanced technology, and came to possess skilled personnel, the material and daily living needs of the collective farmers would, to an ever-increasing degree, be satisfied from the joint economy. Therefore the personal subsidiary economy of the collective farms will gradually lose its significance.

These important considerations, constituting a creative development of Marxism-Leninism, will illuminate the course of further development of the collective farm system.

The Typical Rules of the Agricultural Cooperative constitute the basic law of collective-farm life. Adopted by the Second All-Union Congress of Collective-Farm Shock Workers more than 23 years ago, they corresponded to the economic level of development of the upbuilding of the collective farm of that day and played an enormous role in the establishment and reinforcement of socialism in the Soviet countryside. But it would be wrong to take all the propositions and standards established in the Rules as absolute, and to consider them as established and invariable for all time. The purpose of the Rules was to reflect and give guidance to real economic processes occurring in collective farm production, and in this sense they could not but become outdated. The collective farm is no longer that which it was in the 30s. The collective farms themselves are not what they were. The most tremendous qualitative changes have occurred in the countryside in the course of the development of the collective farm system.

The collective farms have been given the right to introduce changes in the Rules of the Agricultural Cooperative at their initiative, but the time has now come to re-examine a number of its fundamental postulates. Among other things, a significant shortcoming of the existing Rules is to be found in the fact that they do not provide an exhaustive description of the nature of collective farm property, the direction in which it will develop in the course of the building of communism in our country, and its conversion to general public property. It appears to us that the section of the Seven-Year Plan on the further development of agricultural property should have envisaged the need for a re-examination of the Rules of the Agricultural Cooperative.

There was a period in which the concept that the property of the collective farms, held by and freely disposed of by them at their own will, was limited to the products of collective farm production. In our opinion this proposition is wrong as it does not correspond to the realities of collective farm life. The basis of collective farm property is ownership of the means of production. Thus, while collective farms run their economy on land that is general public property, the fact is that this land is assigned to the collective farms in perpetuity, for use by them without payment, and in essence the collective farms dispose of it completely in the interests of the development of collective farm production and of society as a whole.

Erroneous concepts as to the constitution of collective farm property did at one time doubtless interfere with the investigation of problems related to the development of collective farm property and with its basic foundation: the indivisible funds and their role in expanded reproduction by the collective farms. The documents resulting from the February, 1958, and December, 1958, Plenums of the Central Committee of the CPSU have the very greatest scientific significance for clarification and resolution of problems of development of collective farm property and methods of raising it to the level of general public property in the course of the upbuilding of communism. They provide a scientific posing and a profound Marxist-Leninist elaboration of the most important theoretical problems of the development of social socialist property and in the first instance of its two forms and major characteristics.

In his speech at the December Plenum of the Central Committee of the CPSU, Comrade N. S. Khrushchev pointed out: "The most important index of the vitality and strength of the collective farm system is the growth of the indivisible funds of the collective farms. The indivisible funds established by the collective farmers, with the active participation of the entire Soviet people, define the socialist nature of our collective farms and constitute the foundation of cooperative socialist property which, as it develops, will gradually come to approximate and then completely merge with general public property as a single Communist property. The strengthening and expansion of the indivisible funds is one of the most important prerequisites for the gradual transformation of collective farm, cooperative property into general public property. Moreover, the indivisible funds bear witness to the growth of the social wealth of the collective farms and to an upsurge in the welfare of the collective farmers. Therefore, concern for expansion of the indivisible funds must be the vital interest of all collective farmers."

We know from the history of the collective farm movement that the question of creation of indivisible funds in the collective farms was first advanced some years prior to the mass collectivization of agriculture, at the IV Session of the All-Union Council of Collective Farms (1926), and that the basic propositions governing the formation and disposal of the indivisible funds were presented in the resolutions of the First All-Union Congress of Agricultural Collectives (1928). It was then decided that the indivisible fund is not subject to distribution among the members of the collective and "is not subject to claims for indebtedness, even if the collective farm is liquidated, it being, in this case, placed at the disposition of the corresponding higher body of collective farms for the organization of new ones of for the expansion of the existing ones."* Adherence to these conditions had the purpose, first, of guaranteeing the inviolability of the indivisible funds and the impossibility of converting them to the private uses of the collective farms and, secondly, the constant growth of the indivisible funds.

During the years of the upbuilding of the collective farms, the indivisible funds underwent not only quantitative growth, but qualitative change. At the end of 1957 they came to 102,000,000,000 rubles, while during that single year payments into the indivisible funds came to 16,800,000,000 rubles. The average value of the basic productive property per collective farm (book estimate) is 1,291,000 rubles. While, at the outset of the collective farm movement, the indivisible funds consisted chiefly of a merger of the means of production of small peasant economies, today their composition, in terms of actual material things, usually corresponds to the level of a large and highly-mechanized agricultural enterprise.

At present, the most important source of accessions to the indivisible funds consists of contributions from the monetary incomes of the collective farms. Suffice it to say that these deductions have provided a little less than half the indivisible funds of the collective farms. The bulk of the monetary incomes of the collective farms constitute, as we know, monies obtained from the sale of agricultural products. Inasmuch as the major portion of collective farm produce goes into the hands of the government, this source of formation of indivisible funds is made up out of the government payments to the collective farm system. If to this it be added that, at all stages in collective farm development, the government provides enormous non-repayable assistance in the form of loans and grants-in-aid, and the transfer of various types of property, and if the role of government credit in the development of the basic funds of the collective farms be taken into consideration, an inevitable conclusion derives from this to the effect that the creation and growth of the indivisible funds took place under conditions in which assistance from the government was decisive, and in which the working class and the Soviet people as a whole participated actively therein.

In the course merely of a three-year period (1954-1956), according to data based on the annual reports of the collective farms, the government wrote off nearly a billion rubles of collective farm indebtedness in the form of amortization payments on capital investments.

The scope of the credit assistance granted to the collective farms by the government is indicated in no uncertain terms by the table on the following page.

With the growth of production and realization of agricultural products, the share of deductions from monetary incomes into the indivisible funds will rise both in relative and absolute terms. In this connection it is necessary to re-examine a corresponding point in the presently operativ Rules of the Agricultural Cooperative, which limits contributions into the indivisible funds to not less than 12 or more than 20% of the monetary income. These limitations are unnecessary inasmuch as many economically strong collective farms are in a position significantly to increase the rate and level of accumulations within the collective farms.

There can be no doubt that the rise in the contributions into the indivisible funds must come not from a reduction of those going to personal consumption but as a result of an increase in the gross income of the social economy, better utilization of the land, reduction in the cost of farm produce It is also clear that inasmuch as differences exist among collective farms in terms of level of economic development differences will exist in the level at which the labor of the collective farmers is paid for. Labor will be higher paid in a progressive than in an average collective farm, but it must not run too far ahead, and must take only the form of distribution of material goods for individual use. Expansion of the indivisible funds, development of the social economy, and increase in the intensity at which it is run, and growth in the funds for public consumption have just as direct and an even more tangible effect in raising the material and cultural level of the collective farm peasantry Thus, the process of development of the indivisible funds not only does not weaken but, contrariwise, in every way reinforces the material interest of the collective farmers in an increase in production, and is in complete agreement with the step-by-step realization of the Leninist principle of the personal material interest of personnel in the result of their labor.

In investigating the value composition of the indivisible funds it must not be forgotten that a definite portion of collective-farm production (for example, seeds, the feed supply, etc.) is not realized directly, but goes to productive consumption within the collective farm. Under the present system of accounting, circulating capital is not considered part of the indivisible funds. In our view this is wrong. It appears to us that the indivisible fund of the collective farm is like the statutory capital of any enterprise, and there is therefore no basis for eliminating the circulating capital from the indivisible funds, the more so as the circulating capital is also practically incapable of distribution among the members, but must be replaced and grow as the publicly-owned portion of the collective farms' economy develops.

An important source for replenishment and enlargement of the indivisible funds is the allocation thereto of increase in numbers and weight gain of livestock. As stockfarming in common improves and advances, these resources also display a tendency to further expansion.

Finally, a major source of continuous increase in the indivisible funds is provided by the investment of labor by th collective farmers in various structures and construction projects, and also in perennial plantings.

The economic difference among all these resources corresponds to differences in the composition of the indivisibl capital in their substantive form. The structure of the basic capital of collective farm production is as follows (in percent of the total book value at the end of the year) (see table on next page).

These overall data have to be employed with appropriate caution. The point is that, in the first place, the estimated

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* Kolkhozy. Pervy Vsesoyuzny s'ezd kolkhozov, 1929, p. 415.

Long-term Credit to Collective Farms by the Agricultural Bank (mill. rubles)

Purpose	1940	1950	1955	1957
Development of collective cattle raising including:	495.9	1,855.3	2,984.9	3,479.3
construction of shelter and silos, and mechanization of stockfarming operations	90.1	720.0	2,864.4	2,642.3
purchase of livestock	405.8	1,135.3	120.5	837.0*
Construction of power plants, electrification and installation of radio equipment	12.5	357.8	436.6	522.7
Purchase of mineral fertilizer	117.5	231.9	309.4	362.6
Other measures having to do with production including:	264.5	574.8	694.2	853.0
drainage, irrigation and afforestation	28.5	236.5	97.7	141.6
field culture	184.9	148.8	219.1	122.3
Total	890.4	3,019.8	4,425.1	5,217.6

*Including 500,000,000 rubles provided by resolution of the USSR Council of Ministers in 1957 for purchase of young cattle from the population and for feed-lot operations.

book value is presented in current prices for the corresponding years; and, in the second place, that the collective farms have made use of various methods of estimating book value and that, therefore, to take an example, identical structures are ascribed different values in different collective farms. Therefore, the question of the need to reappraise the basic capital of the collective farms, using a unified method, is on the order of business. Nevertheless, control calculations made by us for collective farms in individual districts and rayons, show that the figures presented do, in general, provide an acceptably correct picture of the motion and relative relation among collective farm funds.

	1930	1937	1940	1949	1953	1957
Working animals	25.5	20.4	14.2	16.8	11.7	5.4
Productive animals, fowl, bees	14.6	17.5	19.0	23.0	21.7	16.8
Tractors, agricultural machinery	27.6	8.4	5.9	6.8	6.5	6.7
Transportation equipment	9.8	11.3	8.7	9.7	10.4	11.2
Equipment and inventory	7.3	3.2	4.9	7.1	7.2	6.8
Buildings, structures and perennial cultures	7.1	35.0	37.0	36.6	42.5	53.1
Others	8.1	4.2	10.3	—	—	—

It is clear from the table that the share of tractors, farm machinery, means of transportation, equipment and inventory in the structure of the fixed capital at the end of 1957 was 24.7% (a figure that will rise substantially this very year as the result of the sale of farm machinery to the collective farms). These means of production were obtained chiefly from the financial accumulations of the collective farms, 22.2% having come from stockfarming. The major source for the creation of this portion of the indivisible funds is natural increase and weight gain in animals, purchase of stock playing a lesser role. The collective farmers have contributed a vast amount of labor to construction and particularly to various buildings and perennial plantings, in which fields financial means play a comparatively small role.

Thus, the fundamental means of production are not economically homogeneous either in material composition or by the sources from which they gain in quantity. There is absolutely no question that they display a tendency more and more to perform not group, collective farm-cooperative, but general public functions. But, in our opinion, it does not at all necessarily follow from this that only the indivisible funds approximate general public property in level of development and nature, or, as is held by some economists and philosophers, are already generally public property. The qualitative changes in the indivisible funds as the leading and determining portion of collective farm property signify, in our opinion, a movement of all collective farm property along the path of approximation to general public property, as it is impossible to hold that a portion will undergo transformation without reflecting upon the whole. The development of indivisible funds is not something that occurs in independence or isolation from all that which constitutes collective-farm property. This is a unified process, in which the collective farm-cooperative form of socialist property is raised to the level of general public property and approximates it.

The road to raising the level of collective farm-cooperative property to the level of general public property lies through unswerving elevation of the level of social ownership of collective farm production. Cooperation in production among collective farms is a phenomenon that came into being in the process of development of the Kolkhoz system, and is rapidly growing. Its forms, of course, could not have been foreseen by the compilers of the Typical Rules of the Agricultural Cooperative almost a quarter century ago.

Problems of development of production ties among collective farms were examined by Comrade N. S. Khrushchev in his speech at the December Plenum of the CPSU. The development of the collective farm system, he pointed out, is today characterized by such new, progressive phenomena, as the expansion of the relationships among collective farms in production. These relationships are of the type of joint construction, by the collective farms, of electric power plants, roads, structures for irrigation and drainage, enterprises for the storage and processing of farm produce, and inter-collective farm organizations for the construction and production of building materials. This combination of common efforts makes it possible for the collective farms to solve many important production and social problems. At the same time, it raises socialist collective farm property to a higher level of socialization, and creates more intimate relations between it and public property in the strict sense.

Inter-collective farm cooperation is doubtless a higher level of socialization of collective-farm production and, in corresponding to the problems of the further development of the public economy of the collective farms, facilitates the bringing of collective farm property to the level of general public property.

Inter-collective farm cooperation in production was able to and, in fact did, develop as a broad movement on the basis of the sharp upturn in the economies of the collective farms, when a considerable number of collective farms gained the possibility of applying ever-larger amounts of capital to the development of the public economy, and rapidly to multiply their indivisible funds. Life itself has advanced the need for inter-collective farm cooperation in production, inasmuch as the collective farms have now obtained the material possibility of combining their efforts to solve problems that, in essence, exceed the limits of the individual artels.

Doubtless, such cooperation advances and perfects the development of production relationships in the collective farm sector. However, it would, in our opinion, be wrong to hypothesize that intercollective farm cooperation in production represents a new, third form of socialist property — intercollective farm property, as certain writers suggest. There is no foundation for this either in the theoretical aspect nor at the level of practical conclusions. The significance of inter-collective farm production cooperation consists in reality of the fact that it is one of the major levels in the process, now occurring, of the raising of collective farm property to the level of general public property.

Problems of the development of inter-collective farm production cooperation are as yet given exceedingly meager treatment in our economic literature. Therefore we shall permit ourselves to go into somewhat greater details as to the forms of intercollective-farm cooperation in production, and shall adduce a number of facts that, in our opinion, are important to its development, and shall present some suggestions with regard to this problem.

Intercollective farm production cooperation is undergoing a rapid development in the most various forms and directions. Thus, in Rostov Oblast, 7 intercollective farm power plants, 15 sub-stations, a number of irrigation systems, more than 50 reservoirs, 15 brickworks, about 100 schools, 30 medical institutions, etc., have been built in the recent past. The participation (shares) of collective farms in various intercollective farm enterprises is rising, as may be seen, for example, from the following data (thousands of rubles):

	1956	1957
Krasnodar Krai	39,152	53,770
Moscow Oblast	1,589	1,880
Altay Krai	3,527	10,351
Gorky Oblast	3,653	9,657
Smolensk Oblast	65	843
Belgorod Oblast	487	2,741

In relative terms these investments are small, but they are growing rapidly. A particularly substantial scope is being attained by the work of intercollective farm construction organizations, which is due to the development of large-scale construction on the collective farms.

We know that in 1955-1957 the collective farms built shelter for 48,000,000 livestock, the value of these structures being 31,000,000,000 rubles, and many other structures as well. Collective farmers and the village intelligentsia built 2,027,000 homes with their own funds during the course of these years.

In the collective farms of Belorussia, for example, the postwar years have seen the erection of over 86,000 structures for the housing of livestock, over 63,000 structures for administrative and farming purposes, over 13,000 buildings for cultural and personal service purposes, and 545,000 dwelling houses for collective farmers. In 1957 alone the collective farms of the republic spent 1.5 billion rubles on construction. These funds resulted in the construction of 3,680 buildings for the shelter of livestock (for 500,000 head of cattle and 200,000 fowl), 4,850 structures for farming purposes, 1,300 for cultural and personal service purposes, and 23,000 homes. It is planned to invest over 5,000,000,000 rubles in capital construction in the collective farms of Belorussia in 1958-1960.

In 1957 the collective farms of Latvia have invested abou 300,000,000 rubles in the erection of various structures for farming purposes.

The further economic development of the collective farm is indissolubly related to the carrying out of an even greate volume of construction work. While, previously, it was far ing and livestock buildings that the collective farms erecte for the most part, now, along with buildings for purposes of production, they are building an ever-larger number of cultural, personal service, and medical buildings, as well as housing. Thus, for example, in Belgorod Oblast, the broad involvement of the funds of the collective farms and the active participation by the labor of the rural population in cul tural and personal-service constructions made possible the construction in the collective farms during the past two yea of 192 clubs, 134 schools, 24 libraries, 233 institutions for children, 12 homes for aged collective farmers and 36 med cal offices. Also built were 42 stadiums and 348 playgroun 4,145 wells and 547 bridges, while about 7,000 km of roads were repaired, 130,000 radio plug-in outlets and about 1,5 television sets were installed. 63 power plants, 74 collecti farm lakes, 23 bath-houses and 69 stores were built in 195 alone.

While not a single school was built in Krasnodar Krai in 1953 out of collective farm funds, 117 were so built in 1958 Prior to 1956 the collective farmers of this territory did n build a single hospital, while today 86 are under constructi In 1953 11 community centers were built, and today 184. A appearing are collective-farm enterprises for the processing of agricultural produce. Water supply systems are bei built. Gas is being brought into the villages, and paved inte collective farm roads are being laid. In 1958 the collective farms of Krasnodar Krai will expend about 300,000,000 ru for these purposes.

Also before the collective farms is the job of large-scal construction of garages and repair shops for current maintenance of the tractors, combines and other equipment they have gotten from the machine and tractor stations.

Thus, capital construction in the countryside is becomin increasingly varied.

Local industry and the industrial cooperatives are now n in a position fully to provide the collective farms with buil ing materials. Moreover, there are no few serious shortco ings in the organization of building operations in the collective farms. Many collective farms do not have the necessary materials, construction drags out for long terms of years and is very dear. At the same time, the economically strong collective farms, which possess their own brick-and-tile works, woodworking and other shops, are incapable of utilizing them to the full, as the capacities of these enterprises exceed the needs of their own economies. Thus, for example, in 1956 the Ukraine counted over 6,500 brick and tile enterprises, with a productive capacity of about one billion bricks and 150,000,000 tiles, while the annual output of these works was no more than 200,000,000 bricks and 40-50,000,000 tiles. Thus, a large quantity of equipment, spread around over a considerable number of collective farms, remained unused to a substantial degree.

Also a significant inhibiting factor in construction is the fact that in a number of collective farms it is still conducted on a handicraft basis, without standardized plans and by building tradesmen of low skill or by temporary gangs of hired men, who have no personal interest in the quality of the work performed. Thus, over 330 such teams existed in Vitebsk, Minsk and Mogilev Oblasts in 1957, and they were paid over 12,000,000 rubles higher than the estimate. In addition, brigades of this kind dragged out the work for long periods and made uneconomical use of materials of construction. Thus in the Kevade collective farm of Tyrvas raion of the Estonian Soviet Socialist Republic, hired teams began to build a piggery in 1952, but turned it over for use only in 1956. The reason for this was that six different hired gangs were successively engaged in its construction.

In our opinion, the system of management of village construction is also outdated. The raion bureaus for construction in the collective farms set up ten years ago had, to a significant degree, narrow objectives: to make good the destruction of the war years and to provide shelter for the commonly-held livestock. Today, however, the problem to be solved is the entire complex of matters involved in construction and civic improvement of collective farm villages. New community centers, movies, recreation centers, stadiums, hospitals, collective farm health resorts, schools, etc., are needed. It is necessary even now to solve the problem of village planning, electrification, the provision of water supply, sewage, gas supply, etc. This requires modification both of the system and the organization of guidance of construction in the villages.

Practical experience during the past two years has shown that it is necessary to conduct construction on the basis of advanced forms of organization and industrial methods, which would significantly improve the productivity of labor, cut costs and reduce the length of time needed for construction.

The January, 1955, Plenum of the CC CPSU recommended to collective farms having a large volume of construction and production of low building materials that they establish, on a share-ownership basis, intercollective farm building organizations and enterprises for the production of brick, of cement-and-sand blocks and of tile, and for the construction of intercollective farm hydroelectric stations and other large structures. The need for such organizations was referred to by Comrade N. S. Khrushchev in his report to the 20th Party Congress. "This will," he observed, "permit a larger scale of mechanization of construction, the construction of dwelling houses and other structures more rapidly and at lower costs."

Since 1956 these instructions have begun to be carried into life by the USSR Ministry of Agriculture and the USSR Ministry of Urban and Rural Construction. On the instructions of the USSR Council of Ministers, typical statutes "On Intercollective Farm Construction Organizations" and "On Intercollective Enterprises for the Manufacture of Local Building Materials" were approved in that year.

In accordance with the typical statute, an intercollective farm construction organization is created for the joint performance of capital construction in collective farms having a large volume of construction, with the object of better utilization of resources of persons and materials, more economical expenditure of the indivisible funds of the collective farms, and also to reduce costs of construction.

The question of the creation of an intercollective farm construction organization is solved by a meeting of representatives of the collective farms who had expressed agreement to the formation of such an organization. Management of the intercollective farm construction organization is effected by the Council of the Intercollective Farm Construction Organization in accordance with the statutes and a contract between the participating collective farms.

The circulating and fixed capital in the possession of the intercollective farm construction organizations is formed from share contributions by the participating collective farms. These contributions are made from the funds of the collective farms both in money and in material values by transferring to the intercollective farm construction organization subsidiary enterprises (carpentry shops, rock and other quarries, etc.), various buildings, equipment, tools, means of transportation and other property.

Unfortunately, the principles for calculating the size of the share contributions have not been defined with precision. In some organizations, all the share-holders contribute identical sums; in others the "dues" are calculated as per cent of the financial outlay for construction, per cent of monetary income, per cent of the total indivisible monetary funds at the beginning of the year, in rubles per hectare of all the land assigned to the collective farm, in rubles per hectare of easy ploughland, per hectare of arable and hay meadows, etc.

Much experience in the organization of intercollective farm building enterprises has been accumulated in the Ukraine, in many oblasts of the Russian Federation and other republics. 600 such organizations are already operating in the Ukraine. Nearly 70% of the collective farms of the republic are shareholders in intercollective farm organizations. The intercollective-farm organizations have, in a two-year period, created their producing units. They already have more than 300 brickyards, have opened many stone-quarries and have acquired the needed equipment, machinery and transport means. In 1957 alone they did work to a value of 350,000,000 rubles for the share-member collective farms, and completed 400 large cattle barns, 356 farm buildings, 80 cultural and service buildings and more than 500 dwelling houses for collective farmers. During this same period their enterprises manufactured 90,000,000 bricks, 12,000,000 tiles, 25,000 square meters of wood products, a large quantity of slag blocks and reinforced concrete assemblies, and quarried 900,000 cubic meters of stone. During the current year, the intercollective farm construction organizations of the Ukrainian Soviet Socialist Republic will carry out over 800,000,000 rubles of construction and assembly work.

In the middle of 1958 the Belorussian SSR counted 36 intercollective farm construction organizations. At the beginning of 1958, in the Latvian SSR, intercollective farm construction organizations existed in 29 of the existing 45 raions. At the end of 1957, the intercollective farm organizations of the RSFSR were already engaged in work for the construction of various buildings and structures in 1,100 collective farms. More than 6,000 skilled building tradesmen were engaged in this work.

The creation of intercollective farm construction organizations has made possible a considerable improvement in the level of construction in the villages. The possibility arose of utilizing industrial methods of construction, of making better use of mechanisms and building materials, and of improving the quality of the work. At the same time, construction was pursued in more economical fashion.

By proper use of equipment, intercollective farm enterprises significantly reduce the cost of the produce to be created. Thus, if 1,000 pieces of brick cost 500 rubles at some collective farms in the Ukraine, while government and cooperative enterprises offered brick for sale at 360 rubles per thousand, the same quantity of brick is sold by intercollective farm organizations for 220-250 rubles.

The manufacture of a window assembly costs the collective farms of Bereznyansky raion, Chernigov Oblast, 150 rubles, while an intercollective farm organization manufactures an identical assembly for 97 rubles. The Lesya Ukrainka and Zirka collective farms of Kovel raion, Volynskaya Oblast paid 4 rubles for the production of each slag block, while the same block, manufactured by the Kovel intercollective farm construction organization, now costs the collective farms 70 kopecks apiece.

The sale price of one cubic meter of sawn lumber in the Yelnia raion intercollective farm construction organization of Smolensk Oblast is 200 rubles, but previously 396 rubles was paid for this quantity. A window assembly now costs 187 rubles instead of 289.

The concentration of equipment, mechanisms and skilled workers makes it possible for intercollective farm organizations to mechanize laborious operations, to use their personnel more productively and to employ new and efficient designs, as well as local materials. All this, in turn, results in a reduction in expenditures and an improvement in the quality of the work.

Many intercollective farm building organizations themselves manufacture and employ prefabricated reinforced concrete, manufacture slag blocks, etc. With proper concern for the establishment and expansion of production capacities and equipment pools, intercollective farm organizations are building yards for the manufacture of reinforced concrete products, are organizing the slaking of lime and the manufacture of cement-and-sand tile. In the Moscow and a number of other districts, the intercollective farm construction organizations are removing overburden to launch stone quarries, and are organizing the production of lime-slag, lime-sand and other types of construction blocks, and are also opening inter-collective farm carpentry and brickyards and machine shops.

Reduction in building costs is being attained both for individual types of work, and for construction projects as a whole. Thus, for example, the collective of the Yelnia raion intercollective farm building organization lays one cubic meter of brick wall for 72 rubles, while earlier, when the work was done by hiring outside brick masons, the cost came to 125 rubles. Intercollective farm construction organizations in Penza Oblast build a silo for 10-12,000 rubles, while it formerly cost 20-25,000 rubles.

The Odessa intercollective farm building organization cut the cost of erecting a cow barn with four rows of stalls at the Pobeda Oktyabrya collective farm by 10,000 rubles.

The Salsk intercollective farm construction organization in Rostov Oblast built a barn for 113 cows at 275,000 rubles, while the Put Ilyicha collective farm, which did its own contracting, spent 297,000 rubles on it.

Thanks to mechanization, competent management and improved organization of labor, intercollective farm organizations for the production of building materials and their construction organizations have considerably shortened construction time, and have converted to year-round operation. Thus, the Salsk intercollective farm construction organization was set up in April, 1956. Its shareholders are 8 collective farms in the raion resulting from the merger of a larger number. During the first year of its existence this organization did 1,300,000 rubles worth of work for the collective farms, while in 1957, with the same number of workers, the volume of work was twice as great. The quality of the work also improved. In 1956 mortar-mixers, concrete mixers and cranes were used in construction at only one collective farm in the raion, while today mechanisms of this type are employed at the construction projects of every shareholder collective farm where the intercollective farm construction organization conducts operations. In 1957 it made 168,000 rubles profit. In addition to its work on the collective farms, the intercollective farm construction organization conducts much work on its own. During the perio of its existence it has acquired 3 concrete mixers, 4 mortar mixers, 4 portable 15-kw power plants, 11 flat-bed trucks, a dump truck, a passenger car, 4 conveyors, a saw frame and a number of other mechanisms. Over 535,000 rubles has been invested in basic equipment during these two year

In some raions, cooperation in the construction field has proceeded in a number of different directions, and a whole complex of enterprises has resulted. Thus, in Krasnoarme sky raion, Stalino Oblast, industrial enterprises have assis ed in creating a large, well-equipped intercollective farm plant for the production of slag blocks made from local furnace slag and lime. The quarrying of rock, the production of sand-and-cement tile, woodworking with the aid of a sawframe and a drying department, have been set up. Thus, an entire intercollective farm construction combine, which increases its output each year and expands the scope of construction, has been established.

Many construction organizations are setting up special teams for the assembly of equipment to mechanize livestock farms.

The large scale of the construction being carried on by intercollective farm construction organizations, has also resulted in the need to extablish intercollective farm desig offices. Thus, in L'vov Oblast, an intercollective farm design office, Mezhkolkhozproekt, has started to function. This organization is called upon to draft designs and make estimates for the erection of brickworks, woodworking shops, saw milling departments, automotive garages and other industrial enterprises, as well as for buildings for cultural and service purposes.

In addition to intercollective farm construction organizations, other important forms of intercollective farm coope tion for production also exist.

The theses for the report by comrade N. S. Khrushchev the 21st Party Congress pose the problem of developing co struction of intercollective farm and inter-raion power pla on the basis of collective farm funds. This is in fullest accord with the interests of the government and the collectiv farms. The construction of intercollective farm power pla and transmission lines is already widespread.

In the Ukraine there are about 100 intercollective farm power plants. The construction of the large, 800 kw Niver intercollective farm power plant on the Zbruch River has been completed. The collective farmers are building a 6,0 kw power plant at Gluboch on the Southern Bug to serve 22 collective farms of Vinnitsa Oblast.

In Khokhol raion of Voronezh Oblast, 1958-59 will see th provision of power to all the collective farms, from the go ernment grid. Here an intercollective farm Council on Ele trification has been established, which will use its indivisible funds to pay for the cost of complete electrification of ten collective farms of the raion, the total sum involved being 6,583,000 rubles.

In Abkhazia 7 rural intercollective farm power plants have been built, in the construction of which 53 collective farms participated.

In July, 1957, two intercollective farm power plants went into operation in Ryazan Oblast: the 330 kw Zatonskaya named in honor of the 40th Anniversary of the Revolution, and the Tensyupin, of 1000 kw, named for V. I. Lenin.

Construction has been completed on intercollective farm transformer substations and 90 km of high voltage and low voltage transmission lines for the collective farms of Tambov raion of Tambov Oblast. Current from the Tambov power system is already being delivered to the collective farms.

The construction of intercollective farm radio centers is constantly gaining in scope. For example, 16 intercollective farm radio centers, providing radio service to 60 collective farms, went into operation in 1957 in Kurgan Oblast. Intercollective farm radio centers have gained wide popularity in Ivanovo, Kursk, Bryansk and other oblasts. Mills, hulling mills, oil presses and the like are frequently erected on a cooperative basis.

The experience accumulated by an intercollective farm enterprise to cut peat bedding in Volosovo raion of Leningrad Oblast is worthy of particular attention. It provides bedding to the barns of 10 collective farms. This has made it possible not only to improve the conditions of maintenance of the livestock, but has sharply increased the accumulation of high-quality organic fertilizers.

Many collective farms have begun joint utilization of trucks to obtain better organization of haulage and elimination of deadhead runs. Thus, for example, in Galsk raion of Abkhazia an intercollective farm truck pool has been organized. 24 collective farms have merged their automotive transport into a single enterprise. By appropriate juggling of the machines at its disposal, the intercollective farm transport organization provides rapid delivery of various freights to and from the collective farms. This type of organization of truck transport has made it possible to cut the cost of the shipments. If previously, when automotive transport was utilized separately by each collective farm, the cost of 1 tkm of haulage came to between 1 ruble 40 kopecks and 1 ruble 50 kopecks, the organization of an intercollective farm auto pool reduced it to 80 kopecks.

Intercollective farm truck repair shops have also been organized in Stalino Oblast. Formerly the collective farms repaired their trucks under primitive conditions, and this affected the quality of the repair. The appearance of these new workshops presented the possibility of repairing trucks faster, better and at lower cost.

Life emphasizes the pressing need for further expansion of the bonds among the collective farms. The collective farmers of the Ukraine have shown great initiative. Thus, the collective farmers of the Selidovsky and Pershetraven raions of Stalino Oblast have emerged as initiators of the establishment of intercollective farm storehouses for hybrid corn seed. These enterprises clean, dry and grade the seed. The business is organized so that only one collective farm will have to engage in the raising of hybrid corn, and the rest of the collective farms in the raion will get this seed from it.

Many collective farms have begun to establish intercollective farm artificial insemination stations to combat barrenness, improve the number of purebred stock and raise yields. Organization of such points has yielded great economies to the collective farms, inasmuch as elimination of the stud animals saves each collective 60-70,000 rubles per year.

In their progress toward the national goal of overtaking the United States in the years immediately ahead in the production of the most important farm products per head of population, the personnel of agriculture are seeking out and employing ever-greater reserve capacities.

At the Martynovo alcohol plant, the collective farmers of Zhmerinka raion of Vinnitsa Oblast have created an intercollective farm feed lot. The purpose of this to avoid haulage of alcohol production wastes to the collective farms but to use them on the spot, thus cutting the cost of feeding cattle to condition. A stall-type corral for the cattle has been built near the plant, and a pipeline has been laid from the plant to the stalls to carry the spent wash by gravity flow. Cattle from 16 collective farms are kept in this feed lot. The cattle get all the slops they can eat, and a little roughage and concentrated feeds are added to this cheap and nutritious substance. The average daily weight gain per animal attains a kilogram or more, while the cost of feeding one head for 24 hours is no more 50-60 kopecks.

Another intercollective farm feed lot has been organized at the Lyuten'kovo distillery of Gadyach raion in Poltava Oblast. 32 collective farms of the raion took part in the creation of this lot, its construction and the provision of equipment. A feed lot for pigs has been established at the Ostrog cheese-making plant of Rovno Oblast. Without reducing the volume of cattle being fed to condition on their own farms, the collectives deliver a portion of the young stock to the intercollective feed lot, where a considerable additional amount of meat is produced, considerably less than in the collective farms. The cost of a kilogram of pork is also considerably lower than at the collective farm.

The absence, in the majority of collective farms, of special, standardized, well-designed incubators with a proper system of heating and ventilation inhibits the development of poultry farming. Yet the construction of special incubators in each separate collective farm does not always justify itself. In some raions, intercollective farm hatcheries stations have begun to be established to raise and condition young birds. A station of this kind has been organized, for example, at Bereznovo raion of Rovno Oblast. This station has been set up at the local hatchery, but is financed by the intercollective farm Soviet to which it is subordinate. Birds are kept at this station until they are two months old, and are then turned over to the collective farms. To keep birds here costs the collective farm only one-half as much as on its own property.

The establishment of such hatcheries not only eliminates the problem of inadequate housing, but also makes it possible to raise the birds in larger numbers, and the year round. During the fall and winter periods, such hatcheries may be used with high success to raise the birds to meat, as this is done at the Bereznovo intercollective farm station for the raising and feeding of poultry. Here the seasonal nature of the conditioning of birds for market has been eliminated. The incubator station has proceeded to year-round incubation. In this connection the organization of intercollective farm points for the year-round raising of young birds takes on particular significance.

The survival rate of the young birds raised here, the high yield of birds at minimum costs in feed and funds, and the year-round utilization of the facilities completely makes good all the expenditures involved in the building of the structures and the payment of skilled personnel.

A particularly valuable initiative has been manifested by the collective farmers of Stalino Oblast in organizing the country's first intercollective farm enterprise for raising water fowl. This was done on the shore of the Azov Sea, in the vicinity of Belosaray Point. Five collectives of Pervomaysay raion participated in the organization of an intercollective duck farm. Capital construction and equipment of the farm was provided for by share contributions, and also by 10% to 15% reductions from the profits gained by the sale of the killed fowl. This farm is operated on a cost accounting basis and has its own books. In 1958, 250,000 geese were raised here. Farms of the same kind have been organized in Primore and Budenny raions. In 1957 the intercollective goose farm of Primore raion produced 107 tons of gooseflesh and derived 114,000 rubles net profit.

The construction of intercollective medical institutions has become highly popular. Thus, the collective farms of Yegorlyk raion of Rostov Oblast have built an intercollective sanatorium in Pyatigorsk with 70 beds, and spent over 2,000,000 rubles thereon. In Cherkassy raion of Cherkassy Oblast, an intercollective sanatorium with 120 beds has been built. The collective farmers of Tashlak raion, Fergana Oblast, have built a 25-bed intercollective sanatorium on the land of the Soviet collective farm. The collective farms provide the money for maintenance and treatment of the patients.

Many more similar examples may be adduced. They testify to the fact that intercollective cooperation is developing with success and will in the future occupy a greater and greater share in the production and economic activity of the collective farms, and this may well require the development of new organizational forms of cooperation. The point is that at present intercollective farm cooperation exists only for the purpose of specific projects. However, the time has apparently come for a more extensive joining of the forces and funds of the collective farms for purposes of production and for marketing and purchase.

Concern might well be given to the organization of repair facilities in the collectives. It is possible that it may prove undesirable to separate the operation of agricultural equipment from its repair base, which is now under the administration of the repair and equipment stations. After all, the Repair and Equipment Station, as a supply and marketing organization, is an added level between supplier and collective farm. And their repair functions could well be turned over (if not now, then in the future) to the collective farms themselves on the basis of organization of intercollective farm repair-and-equipment stations. The economic level of the collective farms is constantly rising, and they are at present capable successfully of employing their machine tools and equipment for the repair of tractors and agricultural machines, particularly if it be borne in mind that the repair of the most complex assemblies of the motors will take place, as in the past, at special repair plants.

It seems to us that, in the Rules of the Agricultural Cooperative, the matter of intercollective farm cooperation in production should be specially dealt with in the form of a recommendation to the collective farms that intercollective farm organizations and enterprises be established on a voluntary basis: construction organizations, building material industries, and enterprises for the conditioning and raising of farm animals, for the building of roads, bridges, farm, irrigation, cultural-and-service, and housing structures, fo the construction and operation of power plants, garages, auto-and-tractor current repair shops, etc. Intercollective farm enterprises built on a share basis, with comradely responsibility (in proportion to the shares), must be run on th basis of cost accounting, while their profit may go both to the expansion of the enterprise itself, and in part to distribution among the collective farms in accordance with the shares. Unfortunately, the development of intercollective farm enterprises is often complicated by unnecessary formalities. It is necessary to confirm a unified standard Statute on intercollective enterprises, which could serve as a special supplement to the Standard Rules of the Agricultura Cooperative. Order must also be introduced into the provision of credit for intercollective farm organizations. For some reason the State Bank of the USSR has not applied to them the procedure for acquiring materials for use in production through the raion alliances of consumer cooperatives. The Agricultural Bank of the USSR is not issuing long-term credits to the construction organizations for machinery, mechanisms, power and other equipment. It appears to us that long and short term credits on favorable conditions should be granted for the creation of intercollective farm enterprises of various types, as a new, progressive form of production cooperation at a new stage in the development of the system of collective farms.

The collective farms need well-drafted designs for various buildings and structures, based on the utilization of local building materials, and with due consideration of the climate, soil and other special features of the individual raions. They also need plans for the planning of the housin and farming zones of the collective farms. Such plans do not yet exist. It is, in our opinion, important to provide intercollective construction and other organizations with the appropriate machinery and equipment and also with lumbe in planned fashion, toward which end the USSR State Planning Committee, the state planning commissions of the constituent republics, and the national economic councils should assign special supplies.

In a word, there is a large complex of various questions related to the improvement and reinforcement of the work of the intercollective farm enterprises, the posing and sol tion of which is dictated by the requirements of the presen day and the immediate future. These questions cannot be underestimated, inasmuch as the matter at issue is one of the most important directions in the further development of the system of collective farms, and of the practical rea zation of the problem of raising cooperative collective-fa property to the level of general public property.

S. Semin:

Transition to a Guaranteed Payment for Labor on Collective Farms

The theses for the report by comrade N. S. Khrushchev at the 21st Congress of the CPSU on the target figures for the development of the national economy of the USSR in 1959-1965 note than in the field of the development of agriculture in the forthcoming seven-year period the problem is that of attaining such a growth of agricultural production as will make it possible to satisfy the needs of the population for the most important foodstuffs, sharply to increase the supplies of agricultural raw materials so as to supply the population with an abundance of foodstuffs in broad assortment and high quality and to satisfy all other government needs for agricultural products. In order to solve this problem it is necessary, on the basis of priority growth of heavy industry, to assure, in the forthcoming seven-year period, an increase of about 70% in the volume of gross production of agriculture as a whole, which will make it possible to exceed the present level of production in the USA of the majority of the most important products of agriculture per head of population.

As the result of the reorganization of the Machine and Tractor Stations and the sale of the tractors, combines and other agricultural machines to the collective farms, the necessary conditions were created to enable the latter to bear full responsibility for the development of their economies. In addition to the objective of the most rational utilization of machine equipment, the collective farms are now required to concern themselves with the provision of skilled machine operators, the organization of payment for the labor of these personnel, and also for other experts and of all the members of the collective farms. In this connection, problems of payment for labor in the collective farms, and, primarily the relationship of the payment for labor and the ultimate results of production takes on particular acuteness. With transition to a single scale of purchase prices for farm products and for the evaluation of all collective farm income in monetary terms, the greatest possibility now exists for establishing proper proportions among the distributed income, to identify the net income in each branch of collective farm operation and to determine the degree to which it is utilized in accordance with the objectives set.

Starting in 1953, the collective farms entered a new stage of development, characterized by rapid increase in gross production and monetary income, thus making it possible to provide for an increase in the funds for social accumulation and those for the personal consumption of the collective farmers, and in addition, for growth of the market production of agriculture. The relationship among these funds changes in accordance with the total magnitude of the income, the degree to which the economy produces goods for the market, the level of purchase prices, the requirements to be met in the development of the public economy, and other factors.

In recent years, a fixed, guaranteed rate of pay per labor-day unit, and a transition to direct payment of labor in money, have become widespread. This has been facilitated to a considerable degree by the resolutions of the party and government of March, 1956, which unleashed the creative initiative of the collective farmers in reexamination of the Rules of the Agricultural Cooperative, and also assisted in the dissemination of new, advanced forms of payment of collective farm labor.

The September, 1953, Plenum of the Central Committee of the CPSU recommended that the collective farms adopt a system of quarterly advances to the collective farmers for the labor-day units earned in the cooperative. Experience has shown this form of payment completely to have justified itself. It gives the collective farmers confidence of receiving a given sum of money and payment in kind in a given period, and increases the personal material interest of the collective farmers in the development of the common economy. In view of the positive results of this experience, and also the increase in monetary income due to the development of the cooperative farming of the collective farms and the rise in procurement and purchase prices for the products of agriculture, the CC CPSU and the USSR Council of Ministers recommended, in March, 1956, that the practice of monthly advances to the collective farms be extended and that the system of payment of labor in the collective farms be thus improved.

This resolution of the party and government, along with other important measures for further development of the system of collective farming, played an important role in increasing the personal material interest of the collective farmers in the results of their labor and in transition to guaranteed payment of labor throughout the year. The following indices, in billions of rubles, testify to the significant increase in the monetary incomes of the collective farms of the USSR, particularly in recent years:

1940	1950	1953	1957
20.7	34.2	49.6	95.2

In the last five years alone, monetary incomes in the collective farms rose 120%, and this made it possible to increase payments into the indivisible funds, and also payments to the collective farmers for labor-day units. In this connection there was a change in the structure of the fund for the payment for collective farmers' labor. Previously payment in kind was characteristic of the majority of the collective farms; today monetary payment predominates, and payment in kind is being reduced at the desire of the collective farmers themselves in a number of cases to the level necessary to satisfy the personal needs of the given family. In recent years many collective farms have begun to determine the payments to be made for labor in the coming year in advance, and to determine the sources of regular monetary income from the cooperative economy. All this has made for an increase in the production of marketable commodities by the collective farms, transition to monthly monetary advances to the collective farmers, and then to fixed, guaranteed payment of labor. At the beginning of 1958 more than 200 collective farms in the Ukraine converted to guaranteed payment for labor, among them a number which instituted cash wages, without calculation of labor-day units. The same process occurred in Moscow Oblast.

It is becoming increasingly obvious that, under present conditions, payment by labor-day units, the dimensions of which are not known to the collective farmer in advance, provides inadequate stimulus to rise in labor productivity. At the same time it is clear that conversion to guaranteed payment is possible only under conditions of further uninterrupted development of the cooperative business of the collective farms, and that this requires an increase in the sums allocated to the cooperative capital.

Some comrades hold the view that transition to fixed, guaranteed payment is not possible without considerable free circulating capital. At the same time, they contend that conversion in this direction is attainable only on the basis of monetary settlements in which the labor of the collective farmers is paid for at the level of that of workers on the state farms. From this the conclusion is drawn that transition to guaranteed payment of labor is possible only in economically strong collective farms.

Of course it is easier to make this transition in advanced than in lagging collective farms. Important in this connection is the reserve of circulating capital for continuous payment of labor, as current monetary income does not correspond to the factual requirements of the collective farms for funds month by month.

For the majority of the collective farms, in which field crops provide the main source of income, the general rule is that monetary income is obtained chiefly from August to December, while during other times of the year this income, as a rule, does not cover as much as 50% of all payments that have to be made. In this connection some comrades hold that before proceeding to guaranteed payment to labor, it is necessary to create a monetary reserve fund equal to the payment for labor for an entire year. In our opinion, the setting up of so substantial a fund in money is not obligatory for the transition to guaranteed payment for labor.

On the basis of the data for former years, and the annual plan for production and finance, it is possible in each collective farm to calculate with greater or lesser accuracy the monthly expected monetary income, as well as all possible expenditures including those for payment to labor, and to determine the minimum rotating wage fund. Thus, the Komsomolets collective farm of Makarov raion, Kiev Oblast, found, upon transition to monetary payment, that regular payment for labor in 1957 required a rotating wage fund of 265,000 rubles, although the total annual wages to be paid out came to 534,000 rubles. Calculation of monetary income and expenditures for 1957, as well as the sources from which they would be covered in this collective farm are illustrated in the following table (in thousands of rubles):

It should be observed that the real need for monetary income for the payment of labor would, as a rule, be even less than indicated above, because collective farmers do receive a certain volume of produce against a portion of the monetary payments. Thus, for the transition to guaranteed payment of labor the collective farm needs above all reliable sources of monetary income to a volume that will assure its needs for all forms of expenditures, including those for the payment of labor. In addition, there is need for a reserve fund to assure regular payment of labor regardless of monthly income, as well as food reserves for issuance to the collective farmers on request in fixed quantities. In the absence of such reserves collective farms might make use of special credits from the Bank of Agriculture or special inter-collective farm funds for mutual credit and mutual aid. In the collective farms of the Ukraine and of Latvia experience has already been accumulated in the establishment of inter-collective farm seed, fodder and foodstuff insurance funds.

The wages of workers on state farms are usually taken as the average level of guaranteed payment for the labor of collective farmers. However, upon transition to guaranteed payment, many collective farms are not at first able to set it at the level of payment of workers on the state farms. In order to do this, the more advanced farms should establish reserve funds for financial advances to the collective farmers. For example, in the Krasny Partizan collective farm of Vsevolozhsky raion, Leningrad Oblast, a fund of 190,000 rubles was established for these purposes in 1956, in 1957 it was increased by 60,000 rubles, and it is planned to increase it to 500-600,000 rubles, which would make it possible to convert to monthly guaranteed monetary payment for labor-day units on the level of wages to workers in the state farms. In the Bolshevik collective farm of Shostkin raion, Sumy Oblast, such a fund already comprises 54% of the total sum required for wages per year. It is planned to increase this fund to 4,250,000 rubles by annual deduction of a portion of the net income in cash and kind.

The introduction of guaranteed payment to labor will not only increase the material interest of the collective farmers but will make possible the most intimate relationship betwe this payment and the ultimate results of their work on the basis of appropriate standards of payment and rates, and also of additional payment at the end of the fiscal year. In addition, this makes it possible to set the rate of payment in the collective farms in accordance not only with the quantity of the produce obtained, but with its cost.

Transition to guaranteed wage payment requires all-roun preparation at each collective farm, the development of eco

	Income (current)	Expenditures and deductions	Of which, for payment of labor	Surplus (+) or deficit (-)	Sources for covering expenditures		
					current income	rotating fund	total
January	8	41	30	- 33	8	33	41
February	10	39	32	- 29	10	29	39
March	10	51	40	- 41	10	41	51
April	13	40	30	- 27	13	27	40
May	14	55	42	- 41	14	41	55
June	16	65	50	- 49	16	49	65
July	45	87	60	- 42	45	42	87
August	100	93	50	+ 7	93	—	93
September	300	183	70	+117	183	—	183
October	450	238	75	+212	238	—	238
November	100	69	30	+ 31	69	—	69
December	41	44	25	- 3	41	3	44
Total	1,107	1,005	534	+102	740	265	1,005

nomically justified standards of rates and earnings, determination of the needed size of, and establishment of a wage fund, etc. For example, to ignore the need to create reserve funds corresponding to the level of development of the economies of the collective farms, complicates the utilization of guaranteed payment for labor. Thus, in the Zavety Ilyicha collective farm of Solotchinsky raion, Ryazan Oblast, the plan for 1958 established a guaranteed 10-ruble pay rate per labor day (in addition to the issuance of hay, potatoes, vegetables and certain other products). In 1957, 6 rubles in cash and 5 rubles worth of various products were issued, and a 50,000 ruble fund for payment of labor was established. The preliminary results for this year show that of 1,500,000 rubles planned to be paid out for labor-day units in 1958, the collective farm will be able to pay out approximately 1,100,000 rubles, as its most profitable business — vegetable growing — yielded an income considerably lower than projected in the plan. Thus, in order to assure the guaranteed payment of labor it is necessary to find an additional 400,000 rubles, while the reserve contained only 50,000 rubles. It is obvious that this level of development of this cooperative and its reserve fund are inadequate to provide a guarantee of 10 rubles in cash per labor-day unit in addition to payment in kind. Payment for the labor-day unit in this collective farm at this level would, in practice, mean more than even the average pay to state farm workers, as the labor-day unit here is equivalent only to 70% of the working day in the state farms.

In planning it is necessary to equate payment for the labor of the collective farmers to payment for the labor of workers in the state farms not only for convenience of calculation of the cost of collective farm produce, but also to raise the payment of collective farmers in backward collective farms to that of workers in state farms. However, this does not mean that all lagging collective farms are now capable of basing the actual payment of labor on the rates in the state farms. The level of guaranteed payment for labor must be economically justified in each collective farm, with consideration of all its possibilities. Thus, in the Komsomolets collective farm of Makarov raion of Kiev Oblast, it was decided, for the purpose of accumulating the necessary reserves, to set the guaranteed payment for a day's quota of work at 8 rubles 30 kopecks at first for the lowest category and up to 20 rubles 70 kopecks for the seventh and highest rate.

Practical experience shows that transition to guaranteed payment for labor can be carried out both upon distribution of income in accordance with labor-day units (at first), and upon distribution thereof directly in accordance with monetary rates for output quotas, without calculation of labor-day units at all. In either case, the prime condition for transition to guaranteed payment is an increase in the level of labor productivity and the production of marketable produce, something that is possible only with the completest possible utilization of the land, equipment and hands, and also with economical operation of the business. Only on the basis of the level attained by the economy of the farm is it possible to establish economically justified work quotas and a corresponding level of payment for labor, to assure regular income for uninterrupted payment of labor, along with the payment of other business expenses and the payment of monies due the government, all of which requires establishment of a rotating wage fund of specific size.

With the object of speeding the creation of such funds, many collective farms have set forth a number of measures to increase the incomes of their common economies. These include: expansion of the existing and organization of new branches of production, increasing the yields of fields and animals, reduction in the cost of the produce, and the most complete utilization of working hands and machine equipment, particularly during the winter. In this connection, organization of primary processing of farm produce, and the development of construction and other side enterprises takes on importance.

The significance of such measures lies in the fact that they make for elimination of the seasonal nature of collective farm labor, which in many farms still is primarily a matter of crop raising, and is therefore utilized most unevenly in the course of the year.

Of no less significance is the organization of side enterprises which can operate the year round without loss to the agricultural work of the collective farms — undertakings that can be operated on a large scale in the time free of field work. Thus, in the Ukraine, intercollective farm construction organizations have attained wide development. They also possess more than a thousand brickworks, tile and woodworking shops, stone quarries, sawmills and other enterprises. They assist the collective farms to produce an adequacy of cheap building materials, employ free working hands and equipment, particularly during the winter, and thus raise the incomes of the collective farms.

There can be no doubt that transition to guaranteed payment of labor would raise the material interest of the collective farmers in the development of the joint economy, facilitate the further approximation of the two forms of socialist property and the successful solution of the objectives posed by our party in the Seven Year Plan for the development of the economy of the USSR.

D. Androsov:

Ways to Rationalize the Utilization of our Timber Resources

Planned Figures for the Development of the National Economy of the USSR during the Years 1959-1965 provide for a considerable development of forestry and the lumber industry. Within seven years such large-scale works must be accomplished as the laying of forests over an area of 262 million hectares, the sowing, planting and restoration of felled timber clearings over roughly 11 million ha., the qualitative improvement of forests and their protection from fires and pest damage. The output of wood manufactures — prefabricated houses, furniture, plywood, etc. — will rise to new heights. There will be a corresponding increase in tree felling and deliveries. The total volume of log deliveries, excluding small lumber camps, will rise from 322 million cubic meters in 1958 to 372-378 million cu. m. in 1965.

Huge resources are available to the Soviet Union for the development of forestry and the lumber industry. It has more timber land and lumber reserves than any other country in the world. Its share of timber comprises more than 1/3 of the world supply. Of an over-all area of more than 1 billion ha. of forest land reserves, 722 million ha., i.e., 1/3 of the area of the country, are actually timbered. Taken all together, the timber lands constitute a State lumber reserve of 75 billion cu. m. The timber supply is increasing at the rate of 700-800 million cu. m. per year from natural growth alone. The composition of forests in the Soviet Union is extremely heterogeneous, the valuable conifers comprising more than 80 per cent of the total woodland area.

There are serious flaws in the manner in which we are exploiting our lumber reserves at the present time. As a result of under-capacity felling operations and of leaving felled trees where they fall, about 50 million cu. m. of wood are lost each year at the felling site. In addition, much wood is lost in the form of so-called felling waste (brushwood, treetops, branches, shavings, loose pieces, etc.). Industrial processing also generates many waste products. It has been established, for example, that they amount to 35 per cent at saw-mills, 50 per cent in furniture factories and, in spool and bobbin production, almost 95 per cent, etc. It has been calculated that 70 million cu. m. of wood are lost as waste products during industrial processing. Thus, lumber losses total 170 million cu. m. per year, or half of all the timber felled throughout the country. Bad utilization and high waste lead to superfluous felling and, consequently, to an unwarranted increase in the expenditure of social labor and money both in logging and in the reforestation of harvested areas. All this indicates that sharp improvement is urgently called for in the utilization of our timber resources.

Rational utilization of timber resources is also necessary because, as is well known, the lumber requirements of the national economy are growing yearly. If we were to extrapolate from the standards currently in force for its allocation and utilization, in the next few years logging production would reach almost 1 billion cu. m. and would increase even further thereafter. Such a volume of work would not only lead to the squandering of the country's timber resources, but would also involve a colossal expense in labor, money and transportation.

The improved utilization of timber reserves will also contribute to increasing the profitability of the timber industry, which to this day remains low, as shown by the following figures (in millions of rubles):

	1954	1955	1956	1957	1958 (planned)
Income	2627.6	2978.8	3167.0	3449.4	3168.3
Of which:					
From raw timber	1763.4	1959.3	1946.4	2085.3	2051.0
From basic operations of forest industry establishments	609.3	685.4	795.2	847.3	697.3
From finished commodity plants	254.9	334.1	425.4	516.8	420.0
Costs	2112.6	2178.6	2239.3	2412.4	2400.1
Of which:					
Operational	1920.1	1967.3	2028.2	2164.6	2167.7
Capital investment	152.3	182.8	185.0	225.6	214.0
For management (tentative)	40.2	28.5	26.1	22.2	18.4

It can be seen from the table that the income of the wood industry is low, even if we include returns on the finishing industries and on the basic operations of forest industry establishments. And, proceeding (as we believe should be done) from the fact that the income from raw timber alone is inadequate to cover total costs, it appears that this sector of the economy is virtually operating at a loss. This situation must be eliminated. Socialist forestry should show a profit; if it meets certain conditions, there is every possibility that it can do so. The most important of these conditions is the improved utilization of wood. Rational utilization of lumber reserves and the elimination of wood wastage will make it possible to improve the supply to the national economy and population of wood and its manufactures, to expand and improve the variety of species, to curtail felling operations, to reduce the expenditure of social labor and State funds needed for supplementary felling and the reforestation of depleted stands and, thus, to raise the profitability of the wood industries as a whole.

The utilization of the country's timber resources should be rationalized in two ways: firstly, by sharply improving the utilization of wood at the felling stand and, secondly, by further perfecting industrial wood processing.

It must be remarked that the currently prevalent felling practices contribute little to rationalized wood utilization. Wood consumers are not interested in the optimum utilization of wood at the felling stand, especially of deciduous species. The result of this is that conifers are intensively harvested and deciduous trees only little. Among lumberme and workers in the wood industry, there is even a peculiar "theory" according to which deciduous trees should be used chiefly as fuel, but not as commercial wood. With this, of course, we cannot agree.

The regulations currently in effect for forest management and the fixing of prices on timber stands contribute inadequately to the full utilization of wood in the tree. They greatly reduce the possible yield of usable wood. On the other hand, correctly drawn up data on timber stand price fixing and forestry management should stimulate wood users and forest industry workers to strive for optimum utilization of usable wood instead of discarding so much of it as firewood.

The fixing of wood prices is of great importance to forest industry production. Fixing prices of wood at low levels not only does not promote the improved utilization of the timber resources of the country, but, on the contrary, leads to a wasteful attitude on the part of the lumbermen towards the stands they work, so that they fell a good deal more trees than they can satisfactorily trim and prepare for shipment. And the inevitable result of this is that the wood users perform their wood working and converting operations in an inefficient manner and make no effort to safeguard their wood stocks. According to lumber rates approved in 1950 and currently operative, for example, the price per solid cubic meter of large usable pine logs in the forests of the Moscow, Kaluga, Bryansk, Smolensk, Kalinin and other oblasts delivered to the central zone is 18 rubles for first-grade, 15 for second-grade, 12 for third-grade, 10 for fourth-grade and 8 rubles for fifth-grade timber. Middle and small-sized usable logs are even cheaper. One cubic meter of usable wood costs only kopeks in the chief lumbering districts themselves. The question arises: Will the lumberman value this wood if it is only worth kopeks?

It occurs to us that the rated price of wood is too low. And acceptable though it may to some degree have been heretofore, now that our lumber resources have shrunk and the demand for wood has grown, this price has become obsolete. The cost price of round wood breaks down basically to the cost of felling, trimming, skidding and hauling. So little income is derived from the sale of stump wood that the effect of this category on cost price may be regarded as negligible. The result of this is that lumbermen select only the better trees, leaving a large number of serviceable trees where they stand. Thus, lumber rates should be reviewed and brought into conformity with the state of the country's wood resources, demand and the need for improvement by every possible means of the utilization of our forests.

The plants and mills of the forest industry engaged in the conversion of wood into consumer goods have an important part to play in the maximization of the utilization of our wood stocks. They should be charged with the responsibility for making use of waste products and findings of the lumbering process, and of deciduous woods and other species which for one reason or another have been left standing at the felling site. At the present time, however, not enough attention is being given to factories for the conversion of wood into consumer goods, their role is undervalued and, as a result, their operations suffer from grave defects. These factories are still underequipped, many of them are of low output capacity and, consequently, forest industry establishment revenue from their operations is small. The earning capacity of consumer goods factories must be raised, which will contribute to increasing the profitability of forest industry production as a whole. If this is to be achieved, their plant and equipment will have to be expanded, and their operations will have to be based on the maximum utilization of waste and low-grade woods. In this way it will not only be possible to make use of species which at present stand idle in the forest, but also to increase the production of wood consumer goods, the demand for which hitherto has been inadequately filled, and further to begin putting new and valuable goods on the market, thereby increasing the revenues of forest industry establishments from their own autonomous operations.

It is characteristic of almost all operations in the forestry industry that they are highly labor-consuming. Manual labor and horses are still as widely employed as they used to be. According to decisions taken by the Communist Party and the Soviet government, 1,000 mechanized forest industry establishments must be constructed by 1960, including 750 in the RSFSR. There are at present only 383 such establishments in the RSFSR, and they are not fully equipped with the necessary technological plant. Inadequate application of high-output machinery and apparatus leads to high costs in lumbering operations and, consequently, to the reduced profitability of forest industry production. Special attention should be given to the mechanization of lumbering operations also because it will otherwise prove impossible to cope with the yearly growing volume of work in the forest industry. Widespread mechanization will also permit the introduction in the forest industry of the latest scientific and practical innovations, which will contribute heavily to increasing the over-all earning capacity of the industry.

Our lumbering establishment can contribute decisively to improving the utilization of wood. Over recent years it has been considerably expanded and provided with new, up-to-date machinery and tools. Basic operations are now largely mechanized. Thus, in 1957, felling operations are 92 per cent mechanized, skidding — 83 per cent, loading — 75 per cent and hauling — 85 per cent. Much remains to be done, however, in the mechanization of the lumber industry.

Non-basic operations (and they comprise more than half of all operations) are carried out as a rule by hand, in spite of the fact that they are highly labor-consuming. Bad utilization of equipment and incomplete mechanization of operations lead to unnecessary expenditure of labor and its low productivity, and, consequently, to high production costs. The elimination of these deficiencies and the widespread introduction in lumbering establishments of more advanced operational methods, such as the skidding of whole tree trunks, and the hauling of unbucked logs, will make possible a significant improvement in the utilization of wood and will increase the profitability of forest industry production which so far has remained disproportionately low.

Until recently, the development of our lumbering industry has consisted in increasing the volume of felling and sawing operations. But not enough attention has been paid to the quality of wood utilization. It is now necessary to rectify this deficiency.

The system of lumber camp management is of great importance in the business of improving wood utilization. The system now in force, under which one department fells the tree and another hauls it away, cannot ensure the rational utilization and restoration of the timber resources of our country. The utilization and restoration of our timber resources are two aspects of a unified whole, and cannot be separated from each other. One person — he who fells the tree — should be responsible for everything; otherwise responsibility is atomized and management is rendered impotent.

In many economic administrative raions nowadays, parallel to the lumbering enterprises of the local economic councils, there exists a great number of small lumbering establishments operated by various ministries, departments and the executive committees (ispolkoms) of local soviets, and also by the economic councils of other economic administrative raions. A total felling output of 285 million cubic meters of wood must, according to plan, be achieved in the RSFSR during 1958, of which about 60 million cubic meters is to be contributed by small lumber camps. As a rule, small lumber camps lack permanent personnel and adequate equipment; as a result, labor productivity in these organizations is considerably lower than in the lumbering enterprises operated by economic councils. The presence of many small lumber camps often leads to uneconomic exploitation of timber, the diversion of large numbers of workers to lumbering and to the unrational expenditure of large sums of state funds. It is advisable to concentrate all lumbering camps under the direction of the economic councils transferring to them the lumbering enterprises of ministries and uni and republic departments, as well as those being operated by the economic councils of other economic administrative raions.

A. Alexeyev:

Several Methodological Problems in Standard of Living Computations

In the theses of his report to the XXI Congress of the CPSU on the control figures for the development of the national economy of the USSR during 1959-1965, Comrade Khrushchev points out that by about 1970 and perhaps even sooner, "the Soviet Union will have reached first place in the world both in absolute volume of production and in per capita product output, which will provide the highest standard of living in the world."

This inspiring outlook is a stimulus to a great outburst of creative effort on the part of the peoples of the USSR, the workers of the peoples democracies and of all progressive mankind. The material and technical base of Communism will be completed within the next 15 years. During the course of this period the Soviet Union will achieve a high standard of living such as no capitalist country has ever achieved at any stage of its historical development.

The Soviet Union inherited an extremely low standard of living from the bourgeois-landowning class of Russia. The bourgeois-landowning system deprived the working masses of the Russian city and countryside of working conditions commensurate with human dignity, condemned him to material insecurity and stultified his cultural development. Half a century after the abolition of serfdom, Lenin wrote in his article on "Hunger": "Why was it that in Russia and in Russia alone, such medieval starvation has persisted side by side with the latest advances of civilization? Because a new vampire — capital — is advancing on the peasants of Russia at a time when they have been bound hand and foot by the serf- and land-owning class, by the feudal, manorial tsarist autocracy."(1)

The level of existence of the industrial workers of pre-Revolutionary Russia was lower by far than that of workers in the USA and in the industrially developed countries of Western Europe.

The Great October Socialist Revolution, putting a stop to the exploitation of man by man, set in motion the gigantic growth of the productive forces of Soviet Russia. "During the years since the Soviet government came to power," it is said in the theses of Comrade Khrushchev's report to the XXI Congress of the CPSU, "the workers of the USSR have liquidated the age-old industrial backwardness of Russia and have created a mighty industry which guarantees the economic self-sufficiency and independence of the Soviet state. At the present time the USSR is foremost in Europe and second in the world in respect of volume of production." During the same period, on the basis of the socialist reorganization of agriculture and by supplying it with modern technical equipment, agricultural production has been considerably expanded and labor productivity on the kolkhozes and workers' sovkhozes has been increased. In 1958, the over-all volume of industrial production will be 36 times greater than the 1913 level. Between 1913 and 1957, labor productivity of industry rose 9.5 times in the USSR and 2.3 times in the USA.(2) Per capita production of industrial goods during this period increased 23 times in the USSR, but only 2.3 times in the USA. During this period, per capita national income grew 14 times in the USSR, but 1.8 times in the USA.

All this pre-determined the steady rise in the standard of living of the Soviet people. The Soviet Union is ahead of the USA and the most advanced capitalist countries of Western Europe in rate of growth in the quantity of material goods consumed by the workers. Between 1913 and 1956, the real wages of industrial and construction workers rose 4.8 times, and peasants' real incomes rose 6 times.(3) Contributions to the real wages of workers and employees from pensions, gratuities, free medical care, almost doubled between 1940 and 1958, and the per capita real incomes of peasants more than doubled.

Now, not merely the friends, but the enemies of socialism as well perceive that the prosperity of the Soviet people has risen to such heights as could not have been dreamed of under the conditions of bourgeois-landowning Russia. Within a short time the standard of living of the Soviet people will exceed in every respect the standard of living of the most advanced capitalist countries.

Every attentive student of economic and socio-political developments in all countries perceives great differences in standards of living and essential trend variations between the standards of living of the socialist and capitalist countries. The material and cultural standards of a country depend not only on the level of productive development but on the character of the prevailing social and economic system as well. It is difficult and complex to compare the standards of living of individual countries, especially of different social systems. It is not permissible mechanically to compare isolated elements of living standards under socialism and capitalism and, on the basis of these one-sided comparisons, to draw conclusions. "The living standard," Comrade Khrushchev remarked when replying to questions submitted by V. Sinnbeck, the editor of the journal of the Danish youth organization of the Venstre party Dansk Folkesture, on January 4, 1958, "stands for the degree to which human material and spiritual needs are satisfied. This includes food, clothing, footwear, and other consumer goods, housing, education, medical care, sports, employment security, rest and relaxation, the opportunity to develop all one's best capabilities, and so forth."

If it is to gain the final victory in its contest with capitalism, socialism, promulgated throughout the USSR and now successfully advancing in the peoples democracies of Europe and Asia, must secure such a standard of material welfare and culture to the workers of the city and countryside as is beyond the reach of the capitalist countries. Marxism-Leninism teaches that only the socialist society is capable of guaranteeing the culture and prosperity of all the workers. Herein lies the fundamental, decisive superiority of socialism over capitalism. "Whereas under capitalist conditions," it is stated in the theses of Comrade Khrushchev's report to the XXI Congress of the CPSU, "increasing production leads to the enrichment of a small group of exploiters and is accompanied by a relative and absolute impoverishment of the working masses, under socialism, on the other hand, production is increased in the interests of the entire society for the purpose of satisfying the growing material and cultural demands of all members of the society, and the growth of production leads to the undeviatingly rising prosperity of all the people."

It is no accident that the defenders of the bourgeois order fear a peaceful rivalry between the two opposing socio-economic systems. They are aware that the example of the Soviet Union and of the other countries of the socialist camp, where the living standard of the workers is rising yearly, is an irresistibly attractive force for workers in the capitalist countries. "If the expected rise in the standard of living in the Communist world comes about," the British newspaper Times wrote in October, 1956, "it will produce momentous repercussions in other places ... This is a menacing prospect ..."(4) And it is no accident that nowadays, when the theses of Comrade Khrushchev's report to the XXI Congress of the CPSU are engaging the exclusive attention of the entire world community, the American newspaper New York Times uneasily recalls "the peoples who do not find deliverance from poverty under capitalism." This organ of the monopolistic bourgeoisie of the USA is afraid that, when the Soviet Union catches up with the most advanced capitalist countries, "the allure of the Communist system" will make itself felt with tremendous, unprecedented power in every country.

In their attempts to demonstrate that there are no essential differences between socialism and capitalism, a few bourgeois economists have stated that there are just as many inequalities of income distribution in the USSR as there are in the USA. But at the same time, the defenders of the bourgeois order remain silent on the fact that under capitalism, income assumes a social, class character, but under socialism, it depends only on the quantity and quality of the labor of this or that worker. In other words, socialist conditions have eliminated income inequalities based on property relations and the exploitation of hired labor by capital. Socialism has also eliminated inequalities based on race or sex.

That a correct idea may be gotten of the dynamics of the standards of living of the socialist and of the capitalist countries, including the USA, it is necessary to clarify:

1. For the sake of what goal is the production of material goods engaged in and by what means is this goal pursued?
2. What opportunities are there for the employment of the working classes, the peasantry and the intelligentsia? Is steady employment ensured for all of them? What are their working conditions?
3. How is the national income distributed among classes and groups in the society?
4. What is the level of workers' and employees' wages and of peasants' incomes, and what developmental trends do they reveal?
5. How does the state concern itself for the satisfaction of the material and cultural requirements of all strata of the population?

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In the post-war period, and especially over recent years, the comparison of the standards of living of the USSR and the USA — the two industrial giants of the modern world — has been constantly engaging the absorbed attention both of overt defenders of the bourgeois order and of modern revisionists, cloaked under the Marxist mantle. Striving to discredit socialism in the eyes of the workers, to divert them from the struggle against the capitalist order, to create the illusion that the position of the workers is improving under capitalism, the politicians and ideologues of imperialism are spreading a myth of the growing prosperity of the American people, and of the high standard of living of the plain people, not to mention the abundance of material and spiritual blessings for the ordinary consumer One after another, there appear books, brochures and special reports devoted to the analysis of the relative living standards of the populations of the USSR and the USA. Of this sort are, for example, a book by G. Adams, professor at the University of California, titled Competing Economic Systems, and by the bourgeois economist of the USA, A. Burns, on A Comparison of Economic Systems, and also th reports of the USA Joint Congressional Committee on Economics, Tendencies in the Development of the Soviet Bloc Countries Compared with the Western Powers and The Economic Growth of the Soviet Union Compared with the United States. The authors of these books and reports acknowledge the economic rivalry between socialism and capitalism, the contest between two opposing ideologies — the socialist and the capitalist — as a fundamental feature of the modern international scene. The authors of the report The Economic Growth of the Soviet Union Compared with the United States remark that the outcome of the economic contest between the Soviet Union and the USA "will in significant measure depend on ... the relative living standards of the population." At the same time the report reveals throughout the desire of its authors to impress on its readers the idea that "the American standard of living is hors concours," and that "the Soviet Union is unable to compete with the USA in the field of living standards."

All these assertions have nothing in common with scienc with a correct understanding and evaluation of actual reali with the real trends of the USSR and USA standards of livi

Unable to conceal the great victories of socialism in the USSR from the populations of their countries, the politician and ideologues of American imperialism are striving with might and main to discredit these victories, to falsify the realities of capitalism by every available means, attempting to divert the attention of the workers from the running sores and flaws of the bourgeois order and putting it forward as the most perfect of systems. It is asserted in a book, America's Needs and Resources, published in New York in 1955 and edited by Prof. Dewhurst, that "among all the great industrial nations, only one, namely the one which most firmly held to the system of private enterpris has most closely approached the socialist goal of providin abundance for all in a classless society."(5) The authors o the report The Economic Growth of the Soviet Union Compared with the United States, state that in the USA government participation in economic activity is aimed at securing the individual welfare of the entire population. A few incessantly chattering defenders of the bourgeois order assert that "American capitalism realizes in practice the principle of the second phase of Communism: from each according to his ability, to each according to his needs. This is said, for example, by Johnson and Kruse in their book The Origins and Development of the American Economy."(6)

All this shows that, in their attempt to salvage and rehabilitate imperialism, the bourgeois economists are ascribing to monopolistic capitalism various traits and achievements of the socialist order. They state, for example, tha monopoly produces goods, not for the sake of maximal pr its, but in order to satisfy the material and cultural need of the entire society. The bourgeois economist Louis Galantier calls modern capitalism "a new capitalism, that do not engage in exploitation."

These assertions are theoretically bankrupt, methodologically defective and, in their political purport, constitute an apologia for the bourgeoisie.

Marxist-Leninist economic science has long since established, and life unremittingly confirms that the immediate goal and decisive motivation of the activities of the capitalists and their monopolistic alliances is to extract the surplus value embodied in the unpaid labor of the workers. The craving for surplus value knows no bounds. The pursuit of greater surplus value leads to the accumulation of capitalist fortunes, to enhanced luxury, parasitism, profligacy and idleness among the exploiting classes on the one hand, and to growing unemployment, poverty and misery for the workers on the other. This is the absolute, universal law of capitalist accumulation.

The direction of the economic development of the USSR and all the other countries of the socialist camp is quite different in principle. "The uninterrupted growth of the people's prosperity on the basis of the development of socialist production and of rising labor productivity," Comrade Khrushchev remarks in the theses of his report to the XXI Congress of the CPSU, "is a law of the development of Soviet society."

It is well known that varying levels of real wages prevail in various countries of the capitalist world system. Real wages are higher in the USA, Great Britain, the Federal Republic of Germany, Sweden and Switzerland than, for example, in Spain, Portugal, and especially in the economically underdeveloped countries. The relatively high wage level existing in the imperialist countries is made possible by the exploitation and plundering of the peoples of colonial and dependent countries. Extreme diversity in real wage levels constitutes one of the effects of the operation of the law of the uneven development of capitalism in the age of imperialism.

A comparison of the dynamics of real wage levels in the USSR and in capitalist countries shows that the Soviet Union, relying on the superiority of the socialist order, is overtaking the capitalist countries one by one in this field. Today, the real wage level is lower in most of the countries of the capitalist world system than in the USSR. Even the bourgeois economists, in their report on The Economic Growth of the Soviet Union Compared with the United States, acknowledged that, in the eyes of the peoples of many countries, "far from seeming low, the Soviet standard of living seems, on the contrary, to be high."

When its basic economic task has been accomplished, the Soviet Union will surpass all the industrially developed capitalist countries, including the USA, in the level of real wage earnings. It must be noted that, in the most highly developed capitalist countries, current wage levels are maintained by dint of the stubborn struggle of the working class for a greater share in the national income. This struggle has become stronger and more intense thanks to the existence of the Soviet Union, where the level of material prosperity of the workers is rising yearly in the cities and in the countryside.

The planned figures of the development of the USSR national economy between 1959 and 1965 provide for the further raising of the level of material prosperity and culture of the workers in the USSR. The seven-year plan provides for a sharp increase in the production of industrial goods and foodstuffs for the population, the construction of about 7 million residential houses in rural localities, a 62-65 per cent rise in the USSR national income and an average rise of 40 per cent in the real income of the worker and employee, a rise of also not less than 40 per cent in the real incomes of kolkhozniks, wage adjustments and increases for workers and employees in the low and middle income groups, improved old-age insurance, reductions in the prices of basic foodstuffs and a few other articles, the expansion of children's nurseries and playgrounds, boarding schools and also of homes for the aged. At the end of the seven-year plan, a gradual transition to the 35-hour, and then to the 30-hour work-week, with two days off per week, is to be set in motion. Within the near future, the shortest work-day and work-week in the world will be instituted in the USSR.

What can the countries of the capitalist world, and especially the USA, the richest capitalist country, offer to compare with these majestic prospects of the USSR?

Statistical data and their analysis show that, in the USA, as well as in the other countries of the bourgeois world, the impoverishment of the working class and the other laboring masses is becoming relatively and absolutely more intense. At the same time, the profits of the monopolies are increasing. According to official figures, the profits of USA monopolies after taxes exceeded 30 billion dollars in 1958, against 22.2 billion dollars in 1950 and 5 billion dollars in 1939. Unemployment in the USA in 1958 was higher than it had ever been over the last 17 years. There were 4.1-5.4 million fully unemployed in the USA during the first nine months of 1958; in addition, the number of the partially unemployed is estimated at 11 million. Per capita butter consumption in the USA in 1957 dropped to less than half the 1935 figure. Even the bourgeois journal Nation was compelled to admit frankly that "there are still millions of persons of all ages in the USA whose incomes are under the minimum regarded as necessary to the preservation of health."

In no capitalist country, including the USA, is there anything approaching equitable distribution of the bulk of produced goods, rather, on the contrary, distribution is in accordance with social class distinctions. The antagonistic character of production under capitalism conditions the antagonistic character of national income distribution.

As is well known, the link between production and consumption is effected through the relations of distribution. The character of these relations determines the mode of production. This circumstance must not be lost sight of in the comparison of the per capita industrial and agricultural production levels of the USSR and of the most highly developed capitalist countries. With its social ownership of the tools and means of production and its planned development of the national economy, socialism ensures an incomparably more effective consumption of the material goods produced than capitalism. Under socialist conditions, increased per capita production means not only greater material opportunities for improving the welfare of the people but, unlike capitalism, a corresponding real rise in the living standards of the population.

Replying to questions submitted by V. Sinnbeck, the editor of Dansk Folkesture, the journal of the Danish youth organization of the Venstre party, Comrade Khrushchev emphasized: "... It must not be forgotten that the standard of living is determined not so much by the level of consumer goods production, as by the actual consumption level, and the latter determines the magnitude of solvent demand." But can it be said that solvent demand means the same thing in the case of multi-billionaire Harriman that it does for the rank-and-file worker in the USA?

The gulf between the riches of the exploiter classes and the wretched poverty of the exploited continues to widen. The American economist V. Perlo writes in his book on The Income 'Revolution' that, during the twelve-year period from 1941 to 1952, corporate profits in the USA were 7.6 times greater than during the preceding twelve-year period, while wages and salaries combined were only 2.9 times higher, and farmers' incomes 3.4 times higher during the same period.(7) These data show that the share of workers in the USA in the national income is shrinking. The situation is the same in the other capitalist countries as well.

The absolute impoverishment of capitalist countries is manifested first of all in the fall of real wages below the value of manpower. The divergence between these two magnitudes has existed throughout the history of capitalist society, but never before did the ruling class deprive the workers of so great a share of the commodity production as today, depriving them of most of the fruits of over-all technical progress. Under capitalism, as productive power increases, the situation of the working class and of other labor groups deteriorates and the rate of exploitation of labor by capital accelerates.

The absolute impoverishment of the workers is also reflected in the intensification of labor, the worsening of the conditions under which it is performed, and in the growth of unemployment, of rural migrations, etc.

According to UN data, the number of underfed people in capitalist countries increased from 31 per cent of the total population in 1938 to 59 per cent at the present time. The well-known British scholar, Lord John Boyd-Orr, calculated that the standard food consumption of 15 million Englishmen in 1953 was lower than it had been for workers in the 18th century. Official British statistical data indicate that meat consumption in the country had by 1954 decreased by 6 per cent by comparison with the pre-war period, and for butter by more than 43 per cent.

Former chairman of the US presidential council on economic affairs Leon Keyserling acknowledged in an article devoted to the state of the American economy in 1958 that, during the year, "the average real weekly wage in the processing industries fell by $2.35, while per capita real incomes (after taxes) — this is the consumer basis of every economy — decreased by $29.00."

At the same time, the degree of worker impoverishment in many bourgeois countries, particularly in underdeveloped ones, is considerably higher than in the United States. In 1957, roughly 70 per cent of the capitalist world population (about 1,300 million persons) lived in underdeveloped countries. The situation in these countries as compared with the United States and other highly developed capitalist states is typified by the following figures:(8)

	Highly developed countries	Under-developed countries
Per capita national income (in dollars)	400-1100	25-100
Food consumption (daily per capita calorie intake)	over 2,700	under 2,200
Mortality (per 1,000 inhabitants per year):		
General	about 10	15-20
Infant	30-50	about 100
Number of inhabitants per physician	700-1200	5000-100000
Illiterates over 10 years old (in %)	1-10	30-90
Per capita paper consumption (in kg/year)	5-35	about 1

The poverty of the millions of persons comprising the masses of the populations of colonial and dependent countries, and also in countries that have only recently liberated themselves from political and national oppression, is the result of the rapacious plundering and exploitation of these countries by the more highly developed imperialist states, including the USA.

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The economic vigor of a country and the progressiveness of its socio-economic system are indicated by data on the national income, its size, rate of growth, and the principles on which its distribution and utilization are based. Other conditions being equal, a rapidly growing national income is the real basic condition on which the scale of production and prosperity of the people may at the same time be increased.

The Soviet Union still lags behind the USA in volume of total and per capita national income, but is considerably ahead in th rate of its growth. This is a sure guarantee that the USSR will in the near future outstrip the USA in per capita production, and will move way ahead of the USA in absolute magnitude of national income. The national income of the USSR had in 1956 grown to more than 19 times(9) the 1913 figure, and to almost 26 times the 1917 figure. It is fully understood that the population of the USSR increased during this time. Hence per capita national income rose less, to wit: 13 times over the 1913 figure and 18 times over 1918. Per capita national income in the USA in 1956 had less tha doubled the 1913 figure, and in Great Britain and France, the increase was of roughly 1.6 times.

National Income Changes in the USSR, the USA, Great Britain and France during 1951-1957
(Yearly increase in % of preceding year)

	1951	1952	1953	1954	1955	1956	195
USSR	+12.3	+10.9	+9.4	+12.1	+11.9	+11.4	+6
USA	+ 7.4	+ 2.5	+3.9	- 2.4	+ 8.4	+ 2.6	+0
Great Britain	—	—	+3.6	+ 4.7	+ 1.1	+ 3.9	+1
France	+ 3.7	+ 1.4	+1.4	+ 6.2	+ 9.1	+ 4.8	+6

In the Soviet Union, where social ownership of the means of production prevails, all material goods produced, regardless of which of them represent new value created by human labor, are national income, the property of the wor ers of the city and countryside, and are distributed on thei behalf. The picture is quite different in the USA. In this richest of all capitalist countries, the bourgeoisie and its parasitic hangers-on appropriate more than half of the national income, while the majority of the population can har ly make ends meet and a few million persons yearly recei miserly relief assistance.

In the Soviet Union the entire national income belongs t the workers, and roughly 3/4 of this income is disbursed underwrite the personal needs of the population, while the remainder goes for accumulation and state reserves. In the USA, the workers' share in the national income of 195 comprised 41.3 per cent, while in 1929 it had amounted to 54 per cent of the total national income. Experience lends daily confirmation to Lenin's assertion that "the compara share of the workers in a capitalist society that is rapidly getting richer becomes less and less because the millionaires get wealthier faster."(10)

It is characteristic of many economists in the USA that they do not disprove the fact that the share of the workers in the national income is systematically falling, while the share of the exploiter classes increases. Thus, according to the calculations of the progressive Labor Research Association, the importance of the workers' real wages rela tive to the value of the fruits of their labor had decreased by 11 per cent between 1946 and 1956.

It must also be borne in mind that the cost of living is incessantly rising in the USA. Thus, according to official American data, taking 1947-49 as a base period, the cost of living had risen by 14.5 per cent in 1955, and had advanced to 16.2 per cent in 1956.

Facts irrefutably demonstrate, therefore, that under capitalism, even at times of greatest prosperity, the situation of the worker is improved only negligibly, and not as a mass phenomenon at that. It is known, for example, that the real wages of workers and employees in the USSR increased by 39 per cent from 1950 to 1955, but in the USA only by 3 per cent.(11)

The Soviet government, unremittingly concerned for the improvement of the living conditions of the broad laboring masses, puts into practice measures aimed at improving their life and culture (public health, education, housing construction, etc.), which are inconceivable under capitalist conditions. As a result of these measures, the death rate in the USSR has decreased to one fourth of the pre-revolutionary rate. During the same time, the average life expectancy has more than doubled. The natural growth rate of the population of our country is among the highest. Thus, in 1956, it was 17.5 per 1000 persons, while in the USA it was 15.5, Great Britain — 4.4, France — 5.9, and in the FRG it was 5.3.

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In the Soviet Union, the prosperity of the workers and of all laboring people is determined not only by their individual incomes, earned in accordance with the quantity and quality of their work. A considerable portion of the material and cultural needs of the workers is supplied at the expense of the social consumption fund.

The authors of the report The Economic Growth of the Soviet Union Compared with the United States, comparing the standards of living of the USSR and the USA, remain silent on the fact that the overwhelmingly greater part of expenses for medical care are paid in the USA from personal earnings. Besides, pension and social security funds are accumulated through deductions from the wages of the workers and employees In the USA federal budget for the 1956-57 fiscal year, public health authorizations totaled no more than 0.7 per cent.

The situation is quite different in the Soviet Union. In our country, medical care and education are provided free at all levels. State scholarships are provided for over 3/4 of all students in VUZes (institutions of higher learning, approximately equivalent to an American college. Transl.) and technicums (technical colleges, on a level with VUZes. Transl.) Every year millions of workers are granted accommodation at houses of rest and sanatoriums free of charge or at reduced rates. Pensions and social security are also provided for the workers and employees at the expense of public receiving state pensions in 1957.

In the Soviet Union the disbursements of the state and of enterprises for social-cultural purposes are growing yearly. In 1940 they amounted to 42 billion rubles, in 1950 to 122 billion rubles, in 1955 to 154 billion rubles and in 1956 to 169 billion rubles.(12) This means that disbursements from public funds amounted in 1957 to 2,200 rubles per worker, or 180 rubles per month.

Provisions for housing constitute one of the most important indices of the workers' living standards. The Communist Party and the Soviet government are tirelessly concerned for the improvement of housing conditions for the working class, the kolkhoz peasantry and the intelligentsia of the city and countryside. During the years since the Soviet government has been in power, residential housing in cities and urban workers' settlements has grown 3.7 times. It more than doubled in Moscow between 1926 and 1956. The Party and the government have worked out an extensive plan of housing construction over the next ten to twelve years, which will enable the final elimination of all gaps in workers' housing. There is every reason to assume that this program will be carried out in a much shorter time. To this end, provision has been made for the construction between 1959 and 1965 of a total of 650-660 million cubic meters of residential space, or 2.3 times more than was constructed in the preceding seven-year period. This housing will be constructed in cities and workers' settlements, in the residential areas of sovkhozes, and forest industry establishments through state capital investment and private means assisted by state credits.

The United States still exceeds the Soviet Union in the amount of its housing in being both as a whole and per capita. However, as a result of the vast scale of housing construction in the USSR and of improved construction methods, the USSR will in the not far distant future catch up with and surpass the USA in this area as well. It must also be borne in mind that sharp social contrasts are observable in the United States in the utilization of housing. Immense residential facilities: detached houses, villas, mansions, are at the disposal of the monopolistic bourgeoisie and its numerous parasites. At the same time, millions of workers live in cellars, are cooped up in garrets and slums, and at times don't even have a roof over their heads.

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By keeping silent, bourgeois ideologues and economists also get around the question of the elimination of unemployment in the USSR and of the presence of continuous unemployment in the USA. And this is not accidental.

During times of general capitalist crisis, unemployment becomes chronic in capitalist countries. Even during the second World War, when millions of people were placed under arms or drafted into war production, unemployment was not completely eliminated.

The absence of unemployment in the USSR and the other countries of the socialist camp, and the existence of armies of unemployed millions in the countries of capitalism, bears witness to the colossal superiority of socialism over capitalism. Reluctant to admit this indisputable fact, the compilers of the report have refrained from analyzing the unemployment situation in the USSR and the USA.

When comparing the development of the economies of the USSR and the USA, the authors of the report also do not examine the extent of relative employment in the material and non-productive spheres.

As is well known, the non-productive employment of huge masses of the population is an index of the growth of parasitism and decay of capitalism at the imperialistic stage of its development. In the USA, Great Britain, France and other capitalist countries, the numbers of people engaged in the armed forces, the police, the gendarmerie and other non-productive fields is growing, while the proportion of the population employed in the field of material production is declining.

In 1956, 85.2 per cent of the population of the Soviet Union was employed in the various branches of material production and only 14.8 per cent in the non-productive sphere. We may note for comparison purposes that in 1950, 55.7 per cent of the population of the USA was employed in productive and 44.3 per cent in non-productive fields.

In their efforts to conceal the fundamentally exploitative nature of capitalism, bourgeois economists in the USA make no distinction between the material and non-productive spheres. They assert that every type of income-earner is the creator of that income and, consequently, the "labor" of capitalist industrial and banking tycoons, stockbrokers and bureaucratic functionaries in the government apparatus is just as useful as the labor of workers and farmers. As long ago as at the end of the last century, the bourgeois economist A. Marshall asserted in his book Fundamentals of Political Economy that it is best to regard as productive all labor but that which does not achieve its purpose and, consequently, does not result in anything useful. This pseudoscientific theory is today being propagandized by economists in the USA, Great Britain, France and other capitalists countries.

Continuous mass unemployment is an ulcer of modern capitalist society, whose ideological defenders would rather not discuss. However, they will not always be able to avoid it. Thus Keynes, in Lenin's expression "a notorious bourgeois and ruthless enemy of Bolshevism," was compelled to acknowledge that unemployment "is an inevitable concomitant of modern capitalist individualism." However, he assures the reader then and there that "it is possible, with the help of correct analysis of the problem, to cure the disease and at the same time preserve efficiency and freedom."(13)

It is completely obvious that the attempts of the bourgeois economists to cure this essentially incurable disease of capitalism are doomed to failure. This is borne out by facts. One such fact is the growth of unemployment in the USA, in spite of intensified militarization of the economy.

The undeviating rise in the standard of living of urban and rural workers in the Soviet Union is brought into striking relief when viewed against the background of the impoverishment of the broad masses in the USA, Great Britain, France and other countries of the bourgeois world, their unemployment and constant uncertainty about what tomorrow may bring.

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The authors of the report go into the socio-economic nature of the state in the USSR and the USA. They attempt perverted interpretations of the role of the state under socialism and under capitalism. But they will not succeed in concealing from the workers the true nature of the American state. This is an imperialistic, military and police state. It realizes the dictatorship of the exploiting minority over the exploited majority in the society. It is no accident that the workers and the laboring farmers have no representatives in the higher government bodies and agencies in the USA. Even C. Wright Mills, a professor at Columbia University who can by no means be suspected of sympathy for socialism, was compelled to admit in his book The Power Elite, published in New York in 1956, that in the USA the bosses of capitalist industry and banks "have achieved undivided control of the war-time and post-war economy." C. Wright Mills concludes on the basis of extensive factual material that the big bourgeoisie and bureaucrats of the USA constitute the foundations of all ruling groups. They include the big capitalists, jurists, the higher administrative officials of the monopoliés and prominent political and military figures: 120 of these persons have yearly incomes of over 1 million dollars, 379 of from 500 thousand to 1 million dollars, 1,383 of over 250 thousand and 11,490 have yearly incomes of over 100 thousand dollars.

Relying on the bourgeois state, with its army, police, prisons, the powerful apparatus for ideologically influencing the masses, the magnates of USA finance capital are striving to shore up the ramshackle edifice of capitalism, to keep the oppressed classes docile. Every policy of the ruling circles in the USA, both domestic and foreign, is in fact controlled by monopolistic capital for the purpose of consolidating and preserving conditions favorable to it, of intensifying the exploitation of the working class and other laboring masses in the parent country and in the colonies.

"The Wall-Street monopolists," writes William Z. Foster, "are not content to run the government, so to speak, from a distance. They are right inside it, installing their trusted agents in many high posts in the government and in all the executive agencies. They have seated their men, straight from Wall Street, even in the President's Cabinet and in other highly important posts."

In the light of the foregoing, it is obvious that it was only for their own glorification and the deception of the naive that the authors of the report The Economic Growth of the Soviet Union Compared with the United States allege that, in the USA, the immediate aim and motivating cause of the activities of the state is concern for improving the standar of living of the population.

Unlike the socialist state, the bourgeois state does not an cannot undertake measures aimed at steadily raising the level of material prosperity of the workers.

The taxes imposed on the workers in the USA during the 1958 fiscal year comprised a large part (52 per cent) of the budget, while revenue from corporate incomes was onl 27 per cent. It is no accident that USA President Eisenhower remarked, in his January message to Congress, tha the growth in military expenditures had been made possibl by "curtailing, revising or annulling a few current civilian projects." Consequently, all the burden of the intensifying militarization of the United States falls on the shoulders of the millions of American workers.

Like a gigantic pump, the complex state budgetary mech nism of the United States is extracting huge sums of money from the pockets of the population, and almost for the sole purpose of diverting these funds to the further enrichment of the "cannon kings" through increased exploitation of the population and an intensification of the international "war of nerves."

Paradoxical though it may be, the authors of the report nevertheless assert that it is precisely the capitalist economy which is subordinated to the goal of satisfying the nee of the entire society. This is apparently necessary to them to divert the attention of the workers from the glaring fact that the economies of the capitalist countries, and especia ly of the USA, are to a considerable extent war economies They would do well to recall the words that Eisenhower spoke in his speech of September 4, 1952: "Our economy is a war economy. Our prosperity is a war prosperity."

And in fact, the military outlays of the USA are achievi monstrous proportions. They amount under peacetime conditions to roughly half the yearly military expenditures incurred by America at the height of the second World War. And, besides, these outlays are continuously on the increa Whereas in 1950 roughly 14.6 billion dollars were spent, in 1956-57 the size of such outlays was almost 41 billion dollars.(14) And these are only the direct military outlays which comprise by far the larger portion of the federal budget of the USA.

The current international policy of "brinksmanship," be pursued by the United States, is dangerous to the cause of peace. It is inspired by the real rulers of the country — t big monopolies, whose profits are increased by war contracts.

From the earliest days of its existence, the Soviet Unio has been tirelessly appealing to the governments of the countries of the bourgeois world for the development of peaceful economic and cultural ties and, above all, ties betwe the United States and the Soviet Union. If friendly relation are established between the USSR and the USA, the peoples of all other countries will benefit.

It is quite obvious that the achievement of accords and the development of friendship between two great peoples would disturb the position of the American ruling circles. The sooner they arrive at the conclusion that the "cold war" and the economic boycott are hopeless, and that the armaments race is pointless, the sooner will a turning point be reached in the relations between the Soviet Union and the United States and a beginning made to the peaceful co-existence of both countries on the basis of economic, scientific and cultural competition.

"The chief task of the Communist Party and of its Central Committees," it is said in the theses of Comrade Khrushchev's report, "is now to ensure the unconditional fulfillment of the seven-year plan for the development of the national economy of the country and thereby even further to consolidate the might of our Homeland, to raise the material and cultural living standards of the people even higher."

The Soviet people, solidly behind the Communist Party, are profoundly confident that they will fulfill the economic task of the USSR in the near future and will thereby achieve the highest standard of living in the world.

FOOTNOTES

1. V. I. Lenin, Works, Vol. 17, p. 473.
2. Vide The USSR in Figures. A statistical collection. Gosstatizdat, 1958, p. 32.
3. Vide The USSR in Figures, pp. 415-17.
4. Vide Kommunist, No. 9, 1958, p. 39.
5. F. Dewhurst, America's Needs and Resources. A New Survey. New York, 1955, p. 836.
6. Regarding So-Called "People's Capitalism". Gospolitizdat, 1958, p. 5.
7. V. Perlo, The Income "Revolution". New York, 1954, p. 51.
8. Vide New Times (Novoye Vryemya), No. 39, 1957, p. 25.
9. Vide The National Economy of the USSR in 1956, Statistical Yearbook, Gosstatizdat, 1957, p. 42.
10. V. I. Lenin, Works, Vol. 18, p. 406.
11. Vide The Countries of Socialism and Capitalism in Figures, Gospolitizdat, 1957, p. 108.
12. The National Economy of the USSR in 1956, p. 44.
13. J. M. Keynes, General Theory of Employment, Interest, and Money. Gosinoizdat, 1948, p. 368.
14. Vide Finance in Capitalist Countries, Gosinizdat, 1957, p. 14

V. Kryazhev and M. Markovich

On Increasing the Role of Public Food Service in Raising the Standard of Living of the Workers

The theses of Comrade N. S. Khrushchev's report to the XXI Congress of the CPSU give a great deal of attention to the development of public food service facilities in the country. In the forthcoming seven-year period, the network of dining halls will be expanded, particularly in factories, plants and other enterprises. The production output of public meal-preparing enterprises should rise to more than double its present level. The delivery of meals to homes will become widespread. The task is being set of considerably improving the operation of public meal-preparing enterprises and of lowering their production costs, which will have a beneficial effect on the budgets of workers, above all, and will ease the work of millions of women.

Public food service facilities are very important for the reorganization of living conditions and for raising the level of material prosperity of the Soviet people. V. I. Lenin referred to dining halls, creches and kindergartens as the germinating sprouts of Communism. He pointed out that the Soviet press must describe in detail "the economies in human labor, the advantages to the consumer, the product savings, the liberation of women from domestic slavery, the improvements in hygiene achieved by exemplary Communist work, that can be achieved, and be spread out over all society, to all workers."

The development of the public food service system means a switch-over from unproductive domestic labor to labor organized on a scale of small, medium and even large enterprises utilizing modern equipment, machinery and materials. During the time since the Soviet government first came to power, the public food service system has become an important branch of the national economy of our country. However, its current level of development is inadequate to the increased needs of the workers and as yet a relatively small part of the population uses the services of public dining enterprises. Calculations show that in 1957 about 9 million persons, or roughly 10 per cent of the urban population, were being fed daily from the public food service enterprises of the USSR Ministry of Trade and of the main workers' supply administrations of the various ministries.

If the number of people being supplied from public food service enterprises is to be increased, the number of enterprises, and particularly of dining halls, will have to be increased, retail prices will have to be reduced, the quality of the food offered for sale will have to be improved. It is worth mentioning that the growth in the number of public food service establishments during the post-war period was effected mainly in the categories of luncheonettes and snack-bars rather than of dining halls and other basic types of public food service enterprises. Thus, between 1940 and 1957, the number of dining halls, factory kitchens, restaurants and tea houses increased by roughly 16 thousand, or by 13.6 per cent, while the number of luncheonettes and snack-bars increased during the same period by 30.5 thousand, or by 75.1 per cent. Dining halls at industrial enterprises, institutions, educational establishments, etc., are to be most intensively developed during the forthcoming seven-year period.

Labor productivity is still low at many public food service enterprises. Thus, according to figures reported by the USSR Ministry of Trade for the fourth quarter of 1955, the average output per dining hall worker during the quarter was 4,100 dishes, or about 52 dishes per day. At isolated enterprises the output per worker is somewhat higher. For example, at dining hall No. 841 of the Elektrosvet factory, the current work load per employee runs as high as 80 dishes a day. The housewife, on the other hand, spends roughly 2 hours (including grocery shopping time) in the preparation of a three-course meal for a family of four persons. Thus, most dining halls, including the most up-to-date ones, still spend a relatively long time in the preparation of dishes.

The low productivity of labor at public food service enterprises is explained, firstly, by the fact that they are inadequately provided with up-to-date, and particularly with technological, equipment. Data from the USSR Central Statistical Administration show that, as of January 1, 1958 for every hundred large scale enterprises (dining halls, restaurants and factory kitchens) of the USSR Ministry of Trade, there were, on an average, 46 potato-peelers, 9 vegetable-slicers, 12 dishwashing machines, 4 pastry-mixers, an 3 cream-whipping machines. Public food service enterpri es had almost no automatic meat-grinding machines whateve

Another reason for the comparatively low productivity o labor at public food service establishments is to be found in the large proportion of workers not directly involved in the production of meals (the administrative-managerial apparatus, commercial and bookkeeping workers, waiters, and other dining hall personnel, etc.). The proportion of such workers in the total personnel roster for public food service enterprises of the USSR Ministry of Trade was 69.5 per cent in 1957. This leads to higher production and turnover costs and, consequently, to higher retail prices.

If labor productivity is to be increased and production costs lowered in the public food service field, its organiza tional system will have to be changed. All primary food-processing operations (the peeling of potatoes and other tubers, meat-cutting, etc.) should be concentrated in proc essing plants, thus freeing the dining halls from this labo consuming work. A system should be introduced whereby dining halls are supplied with semi-processed foods from processing plants. This measure will encourage more ex tensive utilization of processing plant facilities and will perm a reduction of about 20 per cent in dining hall personnel.

The assumption by public food service enterprises of purely commercial functions tends to lower the quality of their services to consumers. The public dining industry sold considerably fewer food products for use in meal pre aration in 1957 than it had sold in 1940. For example, ou of total meat and fowl sales for the two years in question, the share of the public food service industry fell from 47 to 28 per cent; of flour, from 23 to 9 per cent; of groats and legumes, from 20 to 9 per cent; of macaroni products, from 21 to 10 per cent; of potatoes, from 35 to 23 per cent; and of vegetables, from 29 to 19 per cent. During the same period, the sale of purchased commodities, not used, as a rule, in the preparation of meals (pastry and sausage products), rose. The ratio of meals prepared at public food service enterprises to their total turnover is still low. Thus, during the first half of 1958, meals prepared at public food service enterprises of the USSR Ministry of Trade comprised only 42 per cent of their over-all turnover, and purchased commodities 58 per cent.

The efforts of workers at some public dining enterprises to produce more expensive dishes hurts many consumers, especially in the low-income worker groups. Taken by itself, the production of expensive dishes is a good thing. But, at the same time, a wide assortment of less expensive, but nourishing dishes should be produced: meals based on vegetables, groats and dairy products. Meanwhile, many dining halls still prepare a negligible number of such dishes. Thus, of the total volume of main course dishes prepared during the second quarter of 1958 by the dining halls of the public food service trust of the Frunze raion in Moscow, vegetable and groat dishes were even less than 14 per cent.

Efforts are made to prepare more expensive dishes in the first place because the assigned production of each public food service unit is expressed in rubles, and also because of the practice that has become prevalent for computing marginal price increments. As is known, the marginal price increment is computed in terms of percentages of the cost of the ingredients. Hence, where more expensive ingredients have been used, the final price of the resulting dish will include a large absolute marginal increment. There is, in our view, no justification for this procedure. The marginal price increment is to cover the enterprise's costs. But the preparation of dishes from more expensive ingredients often involves lower costs.

Other defects could also be enumerated in the prevailing practice of marginal price computation. Under the percentage system, each reduction in the price of ingredients automatically reduces the absolute size of the marginal increment. However, changes in the enterprise's costs, which marginal increments are intended to cover, are independent of reductions in the prices of foodstuff commodities.

It seems to us that it would be more correct to determine the marginal content in the retail price of each individual dish on the basis of the labor time involved in its preparation. This practice is now being applied, for example, in Czechoslovakia.

Food supplies are delivered to public food service enterprises at retail price minus trade discounts, but enter into dish calculations at retail prices. Now, public food service enterprises incur no expenses in the direct sale of these supplies at retail. Under the prevailing calculation system, the resulting marginal increment is too high, which leads to overpricing. Thus, on one dish — mutton soup — the marginal increment at third-grade dining halls is roughly 41 kopeks, and 37 kopeks on fried liver with mashed potatoes. And the marginal increment is even higher at second-grade dining halls. On chopped meat rissolettes, for example, it goes as high as 63 kopeks, on meat goulash 1 ruble and 8 kopeks, etc. For many workers, therefore, especially in the low-income brackets, it does not pay to eat in public dining halls. It has been found from inquiries that workers at industrial enterprises and institutions take their own lunches with them, consisting mainly of bread, butter, sausage, eggs, cutlets and sugar, since it is cheaper to buy these products from the retail trade.

If public food service costs are to be reduced, the currently existing technical maintenance practices for servicing the equipment at public food service enterprises will have to be changed. As shown by an inspection of the food service trust of the Frunze raion in Moscow, carried out in connection with the introduction in 1957 of new technical maintenance rates, in January, 1958 the trust paid the repair and installation combine 6,325 rubles for the technical maintenance of refrigerating units, 1,593 rubles for the technical maintenance of sales equipment, 800 rubles for preventive maintenance on cash registers, and 1,267 rubles for preventive maintenance on gas-burning equipment. In February, outlays of the trust for technical maintenance on refrigerating units rose to 7,625 rubles. These expenses are incurred every month by the trust, regardless of whether equipment is repaired or merely given preventive inspection.

The cost of meals may be reduced not only by curtailing production and turnover costs, but also by price reductions on meal ingredients, especially on meat, which is the principal ingredient in most dishes. In 1957, for example, enterprises of the USSR Ministry of Trade, workers' supply divisions and offices of food supply for industrial workers and employees produced 2,512.7 million meat entrees, or 53.7 per cent of the total volume of main course dishes. Existing subsidiary farms attached to factories and plants should be expanded, and new ones organized, to supply inexpensive meat to dining halls.

In order to attract a larger over-all clientele, it is important that the public food service industry improve the quality of its products and that public food service enterprises adapt their operations as much as possible to meet the requirements of labor conditions at any given enterprise or institution. Thus, it is particularly important that workers doing manual labor be given meals of high caloric content. An investigation conducted by the Labor Research Institute has shown that the three-course meals being offered in any given combination at many factory dining-halls contain no more than 900 to 1,000 calories, while, according to standards for workers doing mechanized labor, they should contain 1,200 to 1,500 calories. The low calorie content of meals cannot but affect the labor productivity of the workers. The compliance by dining halls with standard calorie requirements in the meals they serve is of tremendous importance to the national economy. The standards of meal portioning at third-grade public food service enterprises should be revised and a higher calorie content in meals be ensured.

The quality of meals at public food service enterprises depends not only on the ingredients used, but in many ways also on the culinary ability of the cooks and on the extent to which public food service employees stand to gain materially from improving operations at these enterprises.

Too many inadequately trained cooks are still employed at public dining enterprises at the present time. Thus, according to the USSR Ministry of Trade, as of July 1, 1957, there were 33.6 thousand third-class cooks and cooks' assistants, or 43.7 per cent of the total cook personnel. But at third-grade public food service enterprises the proportion of third-class cooks was even higher.

The records of the food service trust of the Frunze raion in Moscow show that there are, as a rule, not enough first-class cooks to go around for factory and workers' dining halls. For example, the dining halls of the trust have 16 per cent fewer first-class cooks than provided for by plan. And, contrariwise, the number of second and third-class cooks exceeds the established quota by 40 per cent. At some dining halls of the trust there are no first-class cooks whatever.

It would be considerably easier to prepare high-quality and tasty food if each kitchen worker were assigned to the preparation of a limited number of dishes. At the present time, the cooks at open-type public food service enterprises daily prepare many different types of dishes. For example, about ten different main courses are offered daily in many dining halls. The result of this is that the attention of the cooks is scattered. Besides, it is difficult to observe the various temperature requirements of a large variety of dishes being prepared at the same time.

In our opinion, the existing practice must be changed. It is more advisable to prepare first courses (2-3 kinds) and entrees (3-4 kinds), but to change the menu each day. This will contribute to an improvement in the quality of the meals. This practice is now being followed, for example, in Czechoslovakia, where it has been favorably received.

In line with measures aimed at improving the quality and lowering the cost of meals at third-grade dining halls attached to industrial enterprises and institutions, it is also important to take steps to improve the operations of dining halls open to the general public. It must be seen to that not only people at work, but also the members of their families, make use of their services. There must be an expansion of such services as home delivery of meals, the acceptance and execution of advance dinner orders, etc. These services are as yet inadequately evolved at the present time. According to figures reported by the USSR Ministry of Trade and main workers' supply administrations as of October 1, 195 their public food service enterprises made an average of only 529.1 thousand home deliveries per day, or about 2.2 per cent of their total meal output. This is because home meal deliveries are now being made basically by public dining halls intended for serving hot meals to the public in their own dining-rooms. A new type of public food service enterprise has come into being in recent years — the home kitchen, which offers fundamental advantages in compariso with the usual dining hall delivering meals to homes. But there is as yet a negligible number of home kitchens: no more than about 200. The home kitchen has no dining-room all its output is intended solely for home delivery. It is located at the center of a residential area. A council of loca residents is set up to assist the kitchen workers in composing menus and in deciding other problems, and also maintains a check on the performance of the enterprise. The meals prepared at home kitchens are of considerably high quality than those of usual dining halls.

The expansion of the public food service system and the improvement of its performance is one of the most import objectives of the state. The fulfillment of tasks outlined in the planning figures for 1959-1965 and aimed at developing the public food service industry will enhance the scope of its contribution to a higher living standard for the workers of our country.

L. Zlomanov

The Development of Industrial Production on Kolkhozes

In the theses of Comrade Khrushchev's report to the XXI Congress of the CPSU, the "Planned Figures for the Development of the National Economy of the USSR for 1959-1965" emphasize that the most important agricultural problems at the present time are those of increasing the productivity of labor and of reducing production unit costs in terms of labor and money. During the seven-year period, the productivity of labor on kolkhozes should increase to roughly twice its present level, and on sovkhozes by 55-60 per cent.

The chief condition for raising the productivity of agricultural labor is the mechanization and electrification of industrial processes, which permits reduction of labor time and extensive, complex mechanization adapted to conditions in the various agricultural zones. At the same time, the outlook for widespread introduction of complex mechanization already today requires that new ways be found of making productive use of kolkhoz manpower throughout the calendar year, in view of the seasonal character of farm production and the inevitable enforced temporary idleness of its manpower.

Raising the level of mechanization, introducing complex mechanization and intensifying agricultural production, above all in the development of a highly productive livestock industry, while leading to savings in labor and rendering more uniform the work of kolkhoz and sovkhoz manpower, do not, however, eliminate its seasonal character. Hence, in view of the diversification which has taken place on kolkhozes, the problem of maximum productive utilization of manpower is becoming increasingly important.

Few kolkhozes are experiencing an absolute surplus of manpower as yet. On the contrary, several kolkhozes do not have enough, especially during the strenuous period of the harvest. However, the seasonal, temporary idleness of kolkhoz work forces is observable everywhere. For example, according to the annual statements of 104 kolkhozes in the Gorki and Kalinin oblasts, the average monthly number of kolkhozniks taking part in social production is about 30-35 per cent higher between May and October than during the remaining six months. But, when it is considered that the work-day is longer during the first six months than during the remaining ones, and that these figures relate only actual attendance on the job, then these disparities become even more pronounced. Besides, even during the period of basic agricultural activity, the uneven extent to which operations are mechanized gives rise to considerable fluctuations in manpower requirements. Seasonal fluctuations in manpower requirements are a corollary as well of the fact that available labor time does not coincide with production periods, as of the uneven mechanization of scheduled operations.

The peculiarities of kolkhoz specialization greatly influence the extent to which kolkhoz workers are kept busy throughout the year. Thus on flax-growing kolkhozes, the basic farm operations of the spring (tillage and sowing) are almost completely mechanized, and hence labor outlays here are minimal. During this period it is the auxiliary operations which are most labor-consuming: preparing the seed for planting, seed and fertilizer conveying, the application of fertilizers, etc. During the summer season on these kolkhozes, the greatest need for manpower is felt during weeding time, which occurs twice and involves manual labor, and for pulling the flax. In consequence of the low level of mechanization in the harvesting of fodders, winter cereal crops, potatoes and fibre flax, the need for manpower is especially acute between the end of July and the middle of September.

The productive utilization of temporarily idle manpower will enable the kolkhozes to increase their gross production output and to raise their annual monetary income. The solution of this problem is of tremendous national economic significance, as otherwise it will be impossible to eliminate fundamental economic disparities between the city and the countryside. We know that, working 7-8 hours a day, each worker is engaged in productive employment for an average of 290 days a year. But on kolkhozes, the total of days worked by, for example, the members of a tillage brigade during the entire year is small. Thus, on the kolkhozes of the Chkalovsk raion, Gorki oblast, it fluctuates between 173 and 240 days. It is even less when converted in terms of the 8-hour day. And besides, the level of labor productivity in industry is higher than for kolkhoz production.

One way to improve the utilization of labor resources on kolkhozes is to develop certain forms of industrial production, including the so-called subsidiary enterprises. The presence of this kind of kolkhoz industry will permit not only the full utilization of manpower the whole year round, but also the utilization of that portion of the working force which will be released as a result of the further mechanization of farm operations.

It may be objected that the development of these industries will divert the kolkhozniks from their basic tasks. Actually, the "diversion" of kolkhozniks from production is already an objective fact, and is being intensified by the progressive mechanization of agriculture. Moreover, agriculture is suffering materially precisely because a sizeable portion of the able-bodied population is not engaged in the creation of material wealth during a few months of the year. Now, the experience of progressive kolkhozes shows that the high rate of development of their subsidiary activities is complemented by improved efficiency ratings in their basic operations: crop and livestock raising. The experience of the "Avant Garde" kolkhoz, in the Chkalovsk raion, Gorki oblast, may be adduced as an example. In 1957 the kolkhoz produced 260 centners of milk and 60 centners of meat per 100 hectares of cultivated land and 53 thousand eggs per 100 hectares of land under grain. The yield per hectare was: grain — 17.6 centners, fiber flax — 9.5 centners, seed flax — 6 centners, potatoes — 154 centners. The over-all monetary income of the kolkhoz amounted to 4.9 million rubles, or 329.7 thousand rubles per 100 hectares of cultivated land. The kolkhoz has a flax-processing plant, a brickworks, a pottery, a locksmithery and a joinery, a glue factory, lathing installations, a sawmill, a grain mill, a creamery, a wheel-wright and sled-repair shop, and a lime kiln. These industries not only supply the requirements of the kolkhoz, but a large part of their output is sold on the outside. The financial income of the kolkhoz from these subsidiary enterprises during 1956 and 1957 amounted to 1.4 million rubles, or about 18 per cent of the entire monetary income of the kolkhoz during these two years. At the height of the field work, when the kolkhoz has need of extra manpower, almost all the subsidiary enterprises suspend operations and the workers employed in them join the tillage brigades. All the subsidiary enterprises are operated by up to 70 persons, or about 14 per cent of all able-bodied kolkhozniks.

A second argument advanced against the development of industrial production on kolkhozes, that the labor productivity of kolkhoz enterprises is lower, and production costs higher than in large-scale industrial enterprises, is correct in itself, but cannot be used as an argument against the development of industrial production on kolkhozes. To begin with, industry is not yet in a position fully to supply all the goods needed by kolkhozes and kolkhozniks, especially building materials, furniture, certain standard farm implements, etc. In the second place, the reduction of production costs, if it is not accompanied by an increase in production volume, in itself does not solve the chief problem: the creation of an abundance of all products needed by the national economy. Therefore, in our view, it would be incorrect to decide the fate of industrial production on kolkhozes merely on the basis of a comparison of cost levels. Kolkhoz enterprise costs may be a little higher than at large-scale industrial enterprises, but the economic gain to the national economy from increased production of all goods is greater than from cost savings which would accrue if the gross production volume were left unchanged. The construction of enterprises by the kolkhozes themselves above all permits the gaining of time for increasing the output of production in the national economy. And in very nearly every case the kolkhoz enterprises, in spite of their comparatively high production costs, yield a clear profit. Thus, the cost of producing 1,000 bricks on the "Avant Garde" and Timiryazev kolkhozes, in the Gorki oblast, is roughly the same: 445 and 440 rubles. But the average sale price on 1,000 bricks is about 600 rubles, which means a 36 per cent profit on the product. The amount of monetary income derived from subsidiary enterprises is not always an index of their earning capacity because a considerable portion of their output is used to supply the needs of the kolkhoz itself.

The subsidiary enterprises which have emerged on kolkhozes and are capable of further development may be divided into three groups, according to the nature of their products.

The first group includes enterprises engaged in the processing of farm produce. The construction of such enterprises makes it possible sharply to reduce transportation costs and waste of raw materials in the national economy and, in a series of cases, to their improved utilization. Thus, the waste products of wine-making, sugar production, oil mills, starch and molasses production, etc., may be put to use as fodder for the livestock of the kolkhoz. The orga ization of primary flax-processing operations on the kolkhozes of the Gorki oblast has also resulted in a considerable improvement in manpower utilization and in increase monetary revenue for the kolkhozes. The economic result of this type of production can be seen from the table of dat below on two kolkhozes in the Gorki oblast (the "Road to Communism" kolkhoz processes flax into fibre on its own account, and the "XX Party Congress" kolkhoz produces flax straw for the state).

The "Road to Communism" kolkhoz, with the same area of land sown in flax, earned 1.86 times as much monetary income from each hectare as the "XX Party Congress" ko khoz, even though the flax yield capacity of the latter kolkhoz is somewhat higher. The supplementary revenue of the "Road to Communism" kolkhoz from primary processing exceeds 400 thousand rubles. The economic possibilit of constructing such enterprises, provided with the latest technical equipment, is confirmed by the example of the "Avant Garde" kolkhoz. The cost of the flax-processing plant being constructed here is estimated at about 470 thousand rubles, and it will perform the full cycle of oper ations involved in converting the straw into fibre; 740 tho sand rubles are being assigned by the kolkhoz to its indivi ible fund. Allowing for the economic results from the pre aration of flax straw at the plant by the warm-water rett method, it may be expected that it will have paid for itsel within 5-7 years.

The types and sizes of such enterprises depend first an foremost on the area of productive specialization of the k khoz and on its financial condition. Some kolkhozes are in position to build these enterprises right now, but others o later on. These enterprises also include vegetable and fr canneries and plants for the extraction of starch and mola ses from sugar-beets.

The second group of subsidiary enterprises operated o kolkhozes may be said to include enterprises for the production of building materials and of manufactures from m terials available locally. The rise of the economic standing of a kolkhoz is accompanied in the first instance by an expansion of construction activity. New standard housing facilities are being put up on kolkhozes for sheltering live stock and storing machinery and farm implements, as we as other functional and cultural structures. The construc tion of homes for kolkhozniks is also assuming broad dimensions. The outlook for kolkhoz construction work, co sidering the necessity of bringing the living conditions of kolkhozniks up to the same level enjoyed by the urban pop lation, is virtually limitless. It must be noted, meanwhile that, in spite of the acute need for kolkhoz construction, t supply of building materials is as yet inadequate for the p pose.

Many kolkhozes have erected small brickworks with a productive capacity of 100-120 thousand bricks a year. Th

	Average fiber count	Monetary receipts from flax sales		Flax fiber yield (in centners per hectare)
		per hectare of sown land (in thousands of rubles)	per able-bodied worker (in rubles)	
"Road to Communism," Chkalovsk oblast	9.2	18.6	4,250	6.4
"XX Party Congress," Vetluga region	5.4	10.0	2,700	6.8

Timiryazev kolkhoz produced more than 300 thousand raw bricks a year. The "Avant Garde" kolkhoz mastered the technique of producing joiner's glue in a few years, which now not only earns it a clear profit of up to 300 thousand rubles a year, but also yields valuable fertilizer, each unit weight of which is equivalent to 10 unit weights of manure. The Voroshilov kolkhoz, in the Chkalovsk raion, constructed a shop for producing joiner's implements which fills the demand for them on kolkhozes in several raions and earns the kolkhoz a clear profit of more than 40 thousand rubles a year.

The third group of kolkhoz enterprises includes those which produce articles of mass consumption (furniture, farm implements), garment manufactures, etc. Thus, legs for sofas and divans and backs for brushes are manufactured at the "Avant Garde" kolkhoz, the entire output being sold through the city enterprises of the industrial cooperative. The "Road to Communism" kolkhoz has a sewing-shop, several kolkhozes have potteries, etc. These enterprises are typically small: pottery shops employ 1-2 persons, three persons handle the manufacture of furniture parts, etc. At the same time, various types of industrial cooperative artels are located on the land of many kolkhozes and employ 40-50 persons, mostly women. There are also many such artels in raion seats and large cities.

Of course, kolkhozes are not obliged to have all these enterprises. It is quite suitable that kolkhozes should cooperate in the manufacture of many types of products, particularly of building materials such as bricks, slates, window-frames, doors, etc. In forested raions, kolkhozes could also undertake the production of prefabricated houses for the steppe and forest-steppe raions of the country.

The seasonal character of kolkhoz labor must be eliminated and better use made of released kolkhoz manpower so as to improve the productive utilization of manpower in the national economy of the USSR and to raise the level of material prosperity of urban and rural workers. The development of industrial production on kolkhozes on the basis of kolkhoz allocations to indivisible funds and, in a few cases, also through the extension of state credit, will contribute to the solution of this problem. This will increase the volume of gross output as a whole and per kolkhoznik, and the growth of the kolkhoznik's labor productivity. In this manner, the development of industrial production on kolkhozes will contribute to the further consolidation of the kolkhoz system and to the accelerated production of an abundance of material wealth in the country.

A. Barkauskas

The Untapped Potential of Agricultural Production

The "Planned Figures for the Development of the National Economy of the USSR in 1959-1965" in the theses of Comrade Khrushchev's report to the XXI Congress of the CPSU, pose the task of achieving such increases in agricultural production in the forthcoming seven-year period as will bring about a sharp rise in the volume of farm production, ensure an ample food supply for the population, and meet all other requirements of the state in agricultural products.

During recent years industry has provided socialist agriculture with many and diverse machines, either modernized or of completely new type, which have effected great savings in social labor. A further increase is contemplated during the next seven years in the output of modern technical equipment for the mechanization and automation of farming and livestock operations, and it is also intended to improve the technical performance and economy of operation of machinery and equipment produced. More than 1 million tractors, about 400,000 grain combines and a large number of other machines and implements will be produced for agriculture.

It seems to us that, as an aid to the further development of the farm machinery industry, the concrete requirements and working conditions of each zone should be taken into consideration. What is most important of all is to supply all zones of the country with the most versatile, efficient and economical machinery, adapted to specific soil and climatic conditions of agricultural production. The compilation in 1954-56 of a table of machinery for the complex mechanization of agriculture, was a great step forward towards the replacement on a grand scale of manual labor by machines. However, the working out of production methods and the output of new machinery must be accelerated, as out of the 836 basic and 290 modified types of machines included in this table, so far about 250 basic and 70 modified types are in production. Besides, it is not suitable to limit technical progress by constructing and putting into use merely such machinery and equipment as is provided for under the table as adopted. Agriculture comprises hundreds of production processes with their specific technologies and combinations of different branches of production in varying proportions, and production takes place under varying natural conditions. Naturally, no unified table of machinery can be applied indiscriminately to all raions alike; the specific modus operandi of each raion must be taken into account. Thus, for example, the Northwestern zone embraces a huge part of the territory of the country, including the entire Baltic area. Moreover, conditions for the utilization of tractors, combines and other machines vary greatly in the several raions of the Lithuanian SSR alone. It is known that, in the central area of Lithuania, 85.5 per cent of the socially-owned arable kolkhoz land displays a topography that more or less lends itself to mechanized cultivation, while in the Western region the percentage is 64 per cent and, in the East, only 52.4 per cent. The physical character of the soil here also requires more horsepower in one raion than in another. Top and subsoil are both heavily littered with stones. Many tracts of arable farm land are bogged up and, in winter and spring, moisture is as a rule excessive on most of the arable land. The irregularities of its topography, an enormous number of rivers, streams, ravines, swamps, lakes, thickets and forest tracts give rise to a splintering of arable fields and meadows. In Lithuania, as in the other Baltic republics as well, in addition to natural factors, this splintering intensifies the practice of private, isolated farmsteading inheri ed from capitalism.

Several measures will have to be taken over the next seven years in order to achieve maximum mechanization of Baltic agriculture.

In the first place, production of the machinery and apparatus provided for in the table for the Northwestern zon will have to be started in the near future. Some of the typ of tractors, combines and other machines which have been delivered are of no use under the conditions that prevail here. Machines intended for this zone must be much smal er, more maneuverable and sturdy, and must be of more versatile adaptability. Besides, there must be an accelera tion in the designing and production of machinery and equi ment better adapted to the specific natural conditions and farming of the Baltic area.

In the second place, in order to increase soil yields and to create more favorable conditions for the utilization of machinery, there should be an expansion in the volume of physical improvement projects being carried out in the Lithuanian and other republics of the Baltic region of the Soviet Union. No less than 2 million hectares of arable la must be drained in Lithuania alone, of which about 1.5 mi lion hectares by the open channel method. In spite of the fact that great physical improvement projects have been completed under Soviet rule (25.6 thousand hectares were put under open-channel drainage in 1957 alone, or twice a much area as was drained during the 20 years that Lithua was under bourgeois government), they have been inadequ in scope. The theses have set new tasks for the next seve years, for the completion of which projects must be carr out at an accelerated rate, which will necessitate the allo tion of supplementary materials and funds. Widespread u will have to be made of local manpower in the completion these works. Once the land is drained and cleared of sto rubble, and brush, gulleys have been leveled and small pl have been merged into correctly shaped, consolidated extensive tracts, it will be possible considerably to increas the productivity of farm machinery and effect savings in fuel, which is now being wastefully consumed in driving t units from one field to another and in turning them aroun Physical improvement works would also increase the fru fulness of the land, as the grain harvest yield on drained land is increased by from 4 to 6 centners per hectare. O lays of capital could be offset by the resulting gain in yield capacity alone within four years.

In the third place, the small farmstead system must be liquidated during the coming years and well-organized ko khoz settlements must be set up in the Lithuanian and ot Baltic republics, to which end the seven-year plan assig the pertinent tasks to be accomplished, above all in the a of increased production of building materials. Many circ stances contribute to the urgency of this problem. When kolkhozniks spread out over the countryside, settling in private farmsteads throughout the republic, they hinder the creation of consolidated tracts that is needed if sound techniques of crop rotation are to be introduced and optimum performance is to be extracted from complex technical machinery. They hinder the improvement of labor organization and discipline and waste a great deal of time in commuting between their dwellings and places of work. The liquidation of petty farmsteading would not only contribute to the better organization of land cultivation and to the higher effectiveness of farm machinery, but would also make possible a more efficient electrification of agriculture, as provided for in the theses. The practice on some kolkhozes of electrifying the homes of kolkhozniks living on private homesteads can hardly be termed correct. This not only involves considerable expense, but also litters the kolkhoz fields with added encumbrances. Many kolkhozes have become economically strong enough to be able to assist their members to move to consolidated kolkhoznik settlements. By doing so they will contribute fundamentally to the raising of farm production to a higher level, to the more rational utilization of material resources, manpower and financial means, to providing the country with more and cheaper products, the improvement of living conditions and the raising of the cultural level of the rural population.

One specific suggestion remains to be made. A marked improvement must be achieved in the supplying to kolkhozes and sovkhozes of spare parts for tractors, combines, and other farm machines, and repair and maintenance facilities must be expanded. For a lack of a few spare parts, mechanized operations come to a standstill, precious time is lost during periods of intensive field work and, consequently, grain shortages and rising operating costs ensue.

Here are a few figures in support of the above. During 1956, the combined tractor and farm machinery fleets of the MTSes in the Lithuanian SSR worked about 950 thousand machine-days, or an average of roughly 79 thousand machine-days a month. At the same time, for technical reasons, basically because of low-grade maintenance and the lack of spare parts, machine-tractor stock accumulated an idle-time log of more than 143 thousand machine-hours between May and October, or almost 24 thousand machine-hours a month. The elimination of standstills would be equivalent to increasing the machine-tractor fleet by one-third, not to mention the time that would be saved in spring field work and crop tending and the larger harvest that would be obtained.

A reorganization of the MTSes would bring about a more effective utilization of technology on kolkhozes. An experiment conducted in 1958 on Lithuanian kolkhozes has demonstrated that the new field working techniques result in increased labor productivity. Kolkhozes of the republic, once equipped with varied and powerful mechanized tools, completed all their operations in a shorter time and improved the quality of those operations. In several instances, however, a dearth of spare parts was experienced even in 1958. Some parts were planned for in insufficient quantities, others were not delivered on time by manufacturers and yet others, ordered from industrial enterprises of the republic, were not manufactured due to lack of the requisite grades of metal and for other reasons.

In our view, spare part demand computations and manufacturing schedules must be more painstakingly coordinated. Scientifically sound standards must be worked out not only for the depreciation of tractors, combines and other machinery, but also for wear and tear on assemblies, parts and components. When determining the operational life of a machine, not only the technical and performance data supplied by the factory where it and its spare parts are manufactured, but also the statistical record of its performance and depreciation in every zone of the country should be taken into consideration.

The plan for the development of the national economy of the USSR in 1959-1965 should provide for the construction of factories specializing in the manufacture of individual assemblies, spare parts and components, and also for expanding their production by existing factories in quantities to supply all the requirements of agriculture, and for increasing the production of tools and equipment needed by repair shops for maintenance purposes on all kolkhozes.

The execution of the measures proposed would considerably increase the effectiveness of machine operation in socialist agriculture.

N. Tsagolov:

Quesnay's Tableau Economique and Its Significance

(On the Bicentennial of the Tableau Economique)

In December, 1958, it will be two hundred years since the first publication of the Tableau Economique, by Francois Quesnay, an outstanding French economist and the universally acknowledged head of an entire school of political economy which played an exceptionally important part in the ideological struggle in France on the eve of the first bourgeois revolution.

What was the scientific problem which Quesnay formulated and solved in his Tableau Economique? What was the contribution of this work to the social class struggle of that time?

The Tableau Economique was the first attempt in the history of political economy at a scientific analysis of the process of social production not as an isolated, single act, but as a continuously repeating process, i.e., as the process of replacement production. Quesnay was the first to analyse the composition of the aggregate social product and the flow of its elements as the condition of the new production process. Quesnay's Tableau Economique is "a representation, for its time as simple as it was brilliant, of the year-by-year process of replacement production in the manner in which it is carried out through the mechanism of circulation ..."(1) Prior to Quesnay, political economy had not only not solved, but had not even posed this problem.

Mercantilism — the first school of bourgeois political economy — had developed at a time when the natural forms of feudal production were prevalent, when the feudal economy was fragmented and cooped up in small areas. Monetary relations were developed only in international economic relations. Under such conditions, economic science did not have to face the problem of replacement production on the scale of the national economy as a whole. Only the development of the capitalist system, shattering the parochialism of the feudal economic units and binding together the links of a country's economic system, creates the material conditions that raise the problem of social replacement production.

The great scientific feat of Quesnay consisted in that he set himself the task of bringing together the innumerable individual exchange transactions, to find a law where at first glance chaos seems to rule. His merit consists further in that he attempted to analyze the main economic interconnections through which replacement production is carried out as a single, unified process. The Tableau Economique showed economic science a way to penetrate to the essence of social replacement production, concealed by the multiplicity of exchange transactions on the market.

A cursory glance at the Tableau Economique will suffice to perceive that, in spite of the feudal exterior of the Physiocratic system, when compiling his table, Quesnay was thinking of the society, operating along bourgeois lines. To begin with, relations within it are based on money. Secondly, the Tableau Economique is based on the continuous exchange of goods which takes place between industry and agriculture, which are quite separate from each other. Thirdly, both industry and agriculture are run in the capitalist manner, i.e., for the sake of profits, the earning of which is considered by the entrepreneur as a necessary condition for the normal course of the replacement production process.

Every economic phenomenon examined by the mercantilists was studied by them for the purpose of stimulating the flow of capital — of increasing the quantity of money. They sought the source of this increase beyond the borders of the country, in the sphere of international commerce. Mercantilism was organically incapable of analyzing the intrinsic conditions of the replacement production process. Whenever individual mercantilists undertook the study of the reciprocal relations among the various spheres of the national economy and attempted to discover the secret of increased value within the economy of the country, they inevitably came into conflict with fundamental mercantilist doctrine. If the replacement production process was to be analyzed, it was necessary that the foundations of mercantilism be destroyed at the roots.

The most characteristic feature of mercantilism lay in that it made a fetish of money, and in this it seems at first glance a more bourgeois system than that of the Physiocrats, who debunked money fetishism and made agriculture the source of wealth. However, an analysis of the condition of the replacement production process, taken first and foremost as a process of realizing returns, shows that the theoretical investigations of the Physiocrats assumed bourgeoi production precisely. In his study of the process of replacement production of the social product, Quesnay essentially proceeds from a formula of commodity capital circulation The object of his analysis is the circulation not merely of commodities, but of commodities in which surplus value inheres. The purpose of this circulation is the realization of surplus value and the creation of conditions for increasing it further.

Quesnay's utilization of a formula of commodity capital circulation in the compilation of his Tableau Economique indicates that he regarded the flow of money as a derivative of the flow of commodities.

The elimination of the mercantilist money fetish was an important condition for the development of the classic school of bourgeois political economy. And although, debunking mercantilist conceptions, Quesnay and his follower at times arrived at naturalism, this does not alter the fact that the views of the Physiocrats reflected the triumph of the mature forms of the bourgeois economy over its antiquated forms.

Quesnay's Tableau Economique describes not only the material conditions of the replacement production process but also of the reproduction of social relations, of the reproduction of those classes which, according to Quesnay, are indispensable elements in the social structure of society. This point should be especially emphasized. It was not featureless exchange that interested Quesnay, but the flow of the parts of the social product as a form of relationship among classes. His ultimate goal was to explain which were the normal conditions of the reproduction of those classes whose presence he regarded as obligatory in a "natural order." And this is why he did not engage in the study of exchange transactions within each individual class among its individual members. Neither did he examine in dividual exchange transactions among the various classes. Gathering exchange transactions together, Quesnay strives in the final analysis to present a picture of economic relations among classes. At the same time, he depicts, not the external form, but a realistic balance of the material economic relations of classes, indissolubly bound to the exchange of materials among the spheres of social production.

The *Tableau Economique* analyses the conditions of simple replacement production. This is defined by the historical circumstances in which Quesnay's views were moulded. The profound crisis of the feudal system of economic relations, manifested in a decline of agricultural production, demanded above all that a means be sought to prevent its further decline. But this does not mean that Quesnay was not interested in the problem of increased replacement production. The fact that Quesnay speaks of the inadmissibility of freezing entrepreneurs' profits actually means that he advocates capital accumulation. This is precisely the import of the program of the "single tax," from which both farmers and manufacturers were to be exempted.

Quesnay also and directly examines the conditions under which replacement production is to be expanded. He remarks that the "net product" may be increased if expendable funds, i.e., capital, are increased by the net product or by the basic funds of industry.

The class basis and historical limitations of the teachings of the Physiocrats with regard to the conditions of accumulation, affect the character of the sources of replacement production expansion. The "net product" should be, in Quesnay's thinking, not only the sole object of taxation, but also the source of production expansion. Quesnay believed that beneficiaries of the "net product" should segregate part of it for the expansion of replacement production. He thereby gave expression to the interests of the farmer-capitalists. At the same time Quesnay supposed that the basic fund of industry could serve as a source of accumulation. It should be taken into account that the slow and protracted development of industry in France was accomplished under government protection at the expense of huge drains on agriculture. It was this circumstance that gave rise to the Physiocratic idea of the "sterility" of industry and provided the theoretical justification for the Physiocrat proposal that agricultural capital be augmented at the expense of industrial capital as the condition for the expansion of replacement production.

Quesnay's *Tableau Economique* cannot be understood without an analysis of his other works. However, in spite of its brief compass, the *Tableau Economique* contains all the basic theoretical positions and fundamentals of the chief principles of the Physiocratic school.

According to Quesnay, the laws of economics are natural laws and cannot be violated without harming production. This thesis, the methodological basis of the *Tableau Economique* and an acknowledgement in essence of the objectivity of economic laws, is of immense scientific import.

The source of wealth is to be sought in the sphere of production — this is the second most important premise of the *Tableau Economique*.

Quesnay was of the view that, since economic laws are objective, to interfere with economic life was to go against nature. The economic process must proceed independent of the state, everyone has the right to act as he thinks best. The Principle of Free competition is one of the premises of the *Tableau Economique*.

Quesnay proceeds in his *Tableau Economique* from the premise that the nature of exchange is *equivalence*, that circulation does not give rise to profits and that money does not of itself constitute wealth, but is merely the medium of exchange.

Thus, the positions on which Quesnay's *Tableau Economique* are based constitute a decisive blow to mercantilism and to all its standard dogmas.

A basic problem of bourgeois economic thought dealt with the secret of the accumulation of wealth, with where to find its sources. The mercantilist doctrine had held sway for almost two centuries. The essence of this doctrine was that profits rise with circulation and that foreign trade was the source of a country's wealth. Quesnay solves this problem differently. He asserts that circulation is totally incapable of increasing the wealth of a country, and that wealth, the "net product," is created only in material production. Quesnay's great scientific achievement was the demonstration of this thesis. Marx wrote: "The Physiocrats shifted the investigation into the origins of surplus value from the sphere of circulation to that of the actual production process, and thereby laid the foundations for the analysis of capitalist production."(2) Shifting the search for surplus value, of profits, from the sphere of circulation, where it had proved barren, to the sphere of production, opened the way to the solution of the central enigma of bourgeois economy.

When constructing his *Tableau Economique*, Quesnay also proceeded from other important premises which even today are still relevant to the study of the laws of replacement production. Thus, Quesnay ignored price fluctuations, which is the only correct, scientific thing to do in an abstract analysis of the replacement production process.

Quesnay further bases himself on the specific structure of what is produced, not only in respect of its value, but also as regards its natural form. And, although he took the division of the aggregate social product into agricultural and industrial instead of into means of production and objects of consumption as his starting point, the very attempt to analyze that which is produced according to its value and natural form constitutes a respectable contribution to economic science. Marx was later to determine that every analysis of the process of social replacement production is bound to fail if it does not take into account the natural form of the aggregate social product.

Regarding production as the sole source of "net product," Quesnay did not restrict himself, while studying the process of replacement production, to an analysis merely of isolated acts in the production process. He investigated the process whereby the various constituents of the social product are circulated and proceeds from a scientifically fruitful differentiation between original and yearly supplemental advances. This differentiation correctly takes note of the heterogeneity of the elements of capital available for production, conditioned by the variable magnitude of the value transferred to the finished product, by the differences between fixed and circulating capital.

Quesnay's *Tableau Economique*, as also every other conception of the Physiocrats, was and, to this day remains, a subject of discussion. The class basis and historical function of the *Tableau Economique* and of Quesnay's total conception are particularly subject to debate.

A considerable number of bourgeois historians of political economy have regarded the physiocrats as the ideologues of feudalism, as the defenders of the feudal economic system. It must be said that, to a certain extent, the Physiocrats themselves are to blame for these assertions, since they regarded the landowner, with his assertion of "natural rights," as an indispensable link in the social system. Meanwhile, according to the ideas of the *Tableau Economique* and the economic program of the physiocrats, the landowners, the only class benefiting from the "net product" free of charge, without offering equal value in return for it, should alone be subject to the "single tax," and all other estates and classes should be exempt from any taxation whatever. Hence, the praises which Quesnay and the other Physiocrats sing of the landlords who, in their view, are entitled to benefit from the "net product," are to a considerable extent illusory. The program of the Physiocrats essentially presupposes the partial confiscation of land property, because the latter, as is known, yielded an economic return in land rent. But Quesnay's "net product" is nothing else but land rent. Therefore, as Marx pointed out, "in conclusions drawn by the Physiocrats themselves, the apparent exaltation of land ownership changes into its economic negation and into an affirmation of capitalist production."(3)

Justification for the attempt to link Quesnay's system with the ideology of feudalism was also found in the circumstance that he regarded agriculture as the only sphere of social production capable of augmenting wealth. Of course, feudal production was fundamentally agricultural. The exaltation by Quesnay and his followers of agriculture is express in the thesis that "net product" is created in agriculture alone and that, therefore, only the class which is engaged in agriculture is productive, and the class which engages in industry and trade is "sterile." But this thesis amounts in essence to an obeisance to that form of social production that creates profits, that creates surplus value.

Quesnay extols the form of agricultural production in which the landowner acts only as a recipient of the "net product." But in the sphere of agricultural production, according to Quesnay, it is not the peasantry, but the leaseholder (the capitalist farmer) and his hired workers that do the work; the farm is run on a large scale with hired labor-power. Consequently, with Quesnay and his followers, what is actually involved is the capitalist, and by no means the feudal system of agricultural production. For Quesnay, neither the landlords nor the peasants are the agents of production, but the farmer (leaseholder) and his hired hands. The function of the latter is reduced to the creation of products in excess of the product necessary for replacement production. Thus, bringing to the foreground the process of the social replacement production of agriculture as the only sphere in which the productive class may deploy its activity does not alter the fact that the Physiocrats had capitalist, and not feudal social production in mind.

It would be incorrect, however, to regard the feudal motive in Quesnay's system merely as a superficial aspect of his thinking. It is self-evident that, to the extent that he premised himself on large-scale capitalist production, he looked ahead and linked the progress of agricultural production to its capitalist form. But it must not be forgotten that the interests of the bourgeoisie and landowners were, in any event, reconcilable, if an average profit can quickly be secured on capital. Bourgeois criticism of feudalism is limited in character because the capitalist, like the feudal lord, is an exploiter. Defending capitalist production and evolving their program of the "single tax," the Physiocrats not only never drew the conclusion that feudal land ownership should be eliminated but, on the contrary, sought out arguments for the preservation of feudal land ownership. It is thus undeniable that Quesnay's teachings suffered, for class reasons, from a certain feudal limitedness.

The system of the Physiocrats is in many ways internally self-contradictory. It rests on a series of dogmas which have been unable to withstand the test of time. The foremost among these is the assertion that only agriculture yields profit, creates "net product."

The attempts to find the sources of "net product," of surplus value, in agriculture are based mainly on the fact that here the surplus product is perceived in its most tangible form. Surplus labor and surplus product originate pure and simply when there is a surplus of the means of subsistence over and above the quantity needed by the agricultural producer for replacement production. The creation of a surplus product in agriculture is the elementary pre-condition for creation of surplus product in general and, consequentl of surplus value and its specific form as well — land rent, which the Physiocrats erroneously regarded as the only and general form of surplus value.

Thus, although Quesnay was far from discovering the secret of surplus value, he stumbled upon its elementary basis. He had sought for it in production and perceived it in a certain level of labor productivity. And this was Quesnay's momentous scientific achievement.

The Physiocrats did not yet draw the necessary watershed between the production of value and use value, betwee the material content of wealth, i.e., wealth as the aggregat of use values, and wealth as the sum of values. They were inclined to identify the augmentation of the aggregate use values, which they confined to the sphere of agriculture, with the increase of the sum of values. But the Physiocrat actually sought to discover the secret of augmenting value. They were absorbed by the same problem that had engaged the interest of the mercantilists, but they chose a different means of solving it. This was essentially the problem that was raised by the development of the bourgeoisie.

At the time when Quesnay lived, capitalist production was not yet the predominant form of agricultural production in France, but it had already become widespread in a few regions of the country. Industrial production was still weakly developed and the destinies of France were at that time decided above all by the outlook for the development of agriculture. This is why the class scheme that Quesnay used is not yet bourgeois. The Physiocratic system itself, however, is a theoretical defense of bourgeois production.

Of course, the division of society into productive, "steril and proprietor classes is a reflection of Quesnay's feudal preconceptions. This division is based on various signs. On the one hand, the productive and "sterile" classes are seen as representing differing forms of concrete labor — agricultural and industrial labor. On the other hand, the proprietor class has nothing to do with either the one or the other form of concrete labor and is merely a recipient of rent. The distinction in Quesnay between agriculture an industry absorbs the real distinction between classes in bourgeois society.

However, Quesnay's proposed division of society into classes was a step forward in the study of society and classes.

Quesnay divides society into classes not by estates, as had been characteristic under feudalism, but, as a matter of fact, on a bourgeois basis, according to the nature of th participation of this or that class in the production and distribution of surplus value ("net product"). Quesnay attemp to establish a connection between the class structure of society and the structure of production.

True, the producer of surplus value is for him not that class that in reality produces it, and, as the provider of "net product," this class is mentioned as merely part of the social group that confers surplus value. In the final analysis, however, the division of society into classes is subordinated in Quesnay to the task of clarifying the natur of the source of surplus value and of the channels for its distribution.

It must be remarked that the class structure of society from which Quesnay proceeds in constructing his Tableau Economique was fully realistic for the time. The characteristic antagonistic relations of feudal society in Quesnay's day are correctly noted in the class scheme given in the

Tableau Economique. The chief economic relations of this society are acted out against the background of agricultural production, and the struggle between the basic classes takes place because of the surplus product created by agriculture.

For Quesnay, agriculture would progress through the development of large-scale capitalist farmer production, which at the time was still a negligible factor. The mass of French society during that period had not yet precipitated into a capitalist and a wage-labor class either in the city or the countryside. Quesnay conceived that progress would be brought about in agriculture through the agency of the capitalist farmer. The creation of conditions favorable to his growth, his defense against the growing pretensions of the landowners, was Quesnay's chief task.

The class structure given by Quesnay in the Tableau Economique reflects the essential contradictions of the period that witnessed the dissolution of feudalism. The basic social conflict in that period was not between the classes of a bourgeois society (this conflict was merely ripened in the womb of the feudal world), but between the bourgeoisie, struggling for control of the sphere of production, and the feudal lords, who still held the political reins and derived an economic return from their ownership of the land in various forms of rent. The conflict between the feudal lords and the bourgeoisie stands out with greater clarity in the class scheme accepted by Quesnay as normal, than if it were to be regarded from the standpoint of the structure of an evolved bourgeois society. Thus, the class structure accepted by Quesnay, while erroneous in the formal economic sense, was genuine in the historical sense. It was adequate to the solution of the problems of political economy raised by the Physiocrats.

Staking everything on the position of the capitalist class, Quesnay, although he does not call for the expropriation of the landowners, stipulates as an elementary condition of normal production that the landowners should not be allowed to pocket any part of the value of the social product apart from the "net product." He specially emphasizes that the normal course of the replacement production process demands not only that the capitalists be allowed to recoup their "advances", consumed in the production process, but that they be assured a profit, which he regards as a form of wages. There must be full reimbursement of all production costs, among which Quesnay includes the profit of the farmer in agriculture and of the capitalist in industry as a constituent element.

During the period of the dissolution of feudalism, its basic antagonism — between the feudal lords and the peasantry — becomes even more acute, but the struggle between the bearers of the new, bourgeois relations of production — the capitalist class, and the landowner class, begins to move to the forefront of the class struggle. And although Quesnay only praises the detachment of the bourgeoisie engaged in the sphere of agricultural production, while terming "sterile" the other detachment which is directly engaged in the sphere of industrial production, he is nevertheless defending both detachments from the weight of taxation by the state and advocating free, competitive conditions for them. Defending the interests of the new, at that time progressive bourgeois class, the Physiocrats, as Marx has pointed out, were the theoretical precursors and progenitors of the French bourgeois revolution of the end of the 18th century.

As has been noted, Quesnay's Tableau Economique assumes a freely competitive society. It is a merit of Quesnay and the Physiocrats as a whole that, attacking mercantilism, which attempted to pursue a bourgeois policy by feudal methods, the Physiocrats boldly proclaimed the principle of free competition as a condition of the growth and development of the economy. The principle put forward by the Physiocrats was progressive for its time, as it was aimed against the feudal relations that were hindering the development of the productive forces.

The Physiocrats sought justification for their principles of political economy, not in the historical conditions of the period, nor in the conflict, which became most acute in the 18th century, between the growing productive forces and the obsolete feudal relations of production, but in the so-called natural rights of man. In their opinion, the laws of society are dictated by nature just as are the laws of physics. They did not perceive that the economic laws are generated by the relations of production, of property, the status of which is expressed in these laws. But, naive though their notions of the causal basis of economic laws may have been, the attempts of the Physiocrats to determine the laws of bourgeois society were of great significance for the subsequent development of economic science.

Quesnay's precursors, the mercantilists, assumed that the state authority may, at its own discretion, decide what direction the development of the economy should follow, and the idea of the objective existence of economic laws was foreign to them. In opposition to this, Quesnay advocated the thesis that economic laws exist objectively. This thesis was of truly great scientific importance. It was the cornerstone of the entire classical school of political economy and, within the limits of the narrow-minded bourgeois world outlook, of course, the methodological basis of its progressive development.

The proposition that economic laws have their own objective existence could only be advanced so long as the bourgeoisie was the leading class and its political economy asserted progressive ideas. As capitalist society declines, bourgeois political economy rejects this proposition and attempts to assert positions favorable to itself but which have no basis in reality. Modern bourgeois political economy begins by denying the objectivity of the laws of capitalist development and preaches the unscientific, reactionary theory of so-called regulated capitalism.

The scientific analysis of the process of social replacement production begun by Quesnay was not followed up by his bourgeois successors. The Tableau Economique "remained rather obscure to subsequent generations of economists."(4) In certain ways, in the analysis of the process of social replacement production, bourgeois political economy after Quesnay took a step backwards from the point reached by the Tableau Economique. Thus, in his Tableau Economique, Quesnay proceeds from the task of reproducing the initial and yearly advances expended in the production process and, consequently, the replacement production of constant capital is for him an organic element in the process of replacement production as a whole. Since Quesnay, however, bourgeois political economy, basing itself on Smith's false dogma of the breakdown of the value of the aggregate social product into v and m, has deprived itself of the means of arriving at the underlying mechanism of the social replacement production process.

It was Marx alone who, for the first time, appreciated the true worth of Quesnay's Tableau Economique and subjected it to searching and thorough analysis. Exposing the defects of the Tableau Economique and of the premises from which its author proceeded, drawing up in its stead his own "economic table," whose ideas are extensively developed in Capital and in Theories of Surplus Value, Marx at the same time noted the outstanding importance of Quesnay's attempt to analyze the capitalist process of replacement production. "This attempt," Marx wrote, "made in the second third of the 18th century, during the infancy of political economy, was a brilliant idea of the highest order, unquestionably the most inspired of all the ideas put forward by political economy up to that time."(5)

FOOTNOTES

(1) Friedrich Engels, Anti-Duehring, Gospolitizdat, 1957, p. 237.

(2) K. Marx, Theories of Surplus Value, Part I, 1955, p. 12

(3) Ibid., p. 18.

(4) Friedrich Engels, op. cit., p. 228.

(5) K. Marx, op. cit., Part I, p. 321.

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I. Markelov:

Offensive Weapons in the Struggle Against Revisionism

Revisionism — the Greatest Danger. From the experience of the Communist and workers parties in their struggle against modern revisionism. Gospolitizdat, 1958, 468 pp.

The building of socialism and gradual transition to Communism in the USSR, and the building of socialism in the peoples democracies bear striking witness to the triumph of Marxism-Leninism, which has discovered the laws of social development and has shown laboring humanity the right way to liberation from capitalist wage slavery.

The great leader of the October Socialist Revolution, the founder of the Communist Party and the Soviet State, V. I. Lenin, fighting for the purity of Marxist theory, revealed the social origins, the class and ideological nature of opportunism and revisionism in the world labor movement. He showed that attempts at the "amendment and restatement" of Marxism in philosophy, political economy, the theory of the proletarian revolution and the building of socialism, are used by the bourgeoisie as weapons in the class struggle against the ideology of the proletariat.

Lenin emphasized that each new turn of events, each new occurrence in the life of society witnesses a revival of opportunism in the labor movement. Unstable elements in the ranks of the working class and its party prove unable creatively to apply the solid, tested principles of Marxism-Leninism to new developments. Instead of studying reality scientifically, they start screaming that Communism is "obsolete."

In the current acute stage of the world-wide ideological contest between socialism and capitalism, while the socialist world system is achieving solid successes and the capitalist economic structure is suffering profound upheavals, the Communist and workers movement is faced with the full-grown problem of struggling against revisionism, which presents the greatest danger to the cause of the working class. Modern revisionism attempts to discredit the teachings of Marxism-Leninism, to undermine the faith of the working class and laboring masses in socialism; it questions the historical necessity of the proletarian revolution and dictatorship of the proletariat; it denies the leadership of the Marxist-Leninist party.

The decisions of the XXth Congress of the CPSU and historical documents of the November Conferences of representatives of Communist and workers parties in Moscow — the Declaration and Manifesto of Peace — offer searching analyses of the nature of modern revisionism.

The work under review contains speeches by leading figures in the Communist and workers parties of countries the world over. It opens with a speech delivered by Comrade N. S. Khrushchev before the VIIth Congress of the Bulgarian Communist Party on June 3, 1958.

Comrade Khrushchev's speech, brilliant and saturated with facts and theoretical principles, raises and thoroughly discusses the basic problems of the Communist and workers movement relating to the transcending by Communism of national boundaries, points up the tremendous importance of the socialist world camp for the intensification of the struggle for peace, democracy and socialism, gives a profound analysis of the new type of political and economic relations which have arisen among the countries of socialism based on the great principles of proletarian internationalism, brotherly cooperation and mutual assistance.

The speech criticizes the revisionist views of the leaders of the Yugoslav Communist League, as they are extensively expressed in the new Yugoslav Communist League program. Khrushchev exposes the spurious thesis of the Yugoslav revisionists that mutual assistance among the countries of the socialist camp is allegedly based on the "hegemony" of this or that "leading power," and that the leadership of the Communist Parties of these countries is "accustomed to the receiving and carrying out of directives issued from without." There is no difference whatever between these assertions of the revisionists and the hackneyed theses of imperialist propaganda.

The foreign policy of the Soviet Union has been and will remain the same — a policy based on Leninist principles, on the principles of non-interference in the internal affairs of other countries. As regards relations with socialist countries, they are characterized by brotherly mutual assistance, firm unity and full ideological and political solidarity. This new type of mutual assistance is discussed in detail in the articles and speeches of the leaders of fraternal Communist Parties in the countries of the socialist camp, published in the collection under review.

Comrade Khrushchev exposes the unsubstantial assertion of the Yugoslav Communist League leaders that, allegedly, "Marxist thought during the last decade has lagged behind the development of modern society," and that, as a result, "many gaps have appeared in subsequent scientific Marxist interpretations of modern social problems, especially in regard to the conformity to natural law and to contradictions of the period of transition from capitalism to socialism." The disregard of the YCL leaders for the practical experience of building socialism has nothing in common with Leninism. As is known, V. I. Lenin referred to the plan for the electrification of our country as the second program of the Party. Lenin perceived the indissoluble link between the theory and practice of socialist construction. There can be no revolutionary practice without a revolutionary theory, and if there is no revolutionary practice, Marxist-Leninist theory cannot develop.

The 20th century is marked by the world-historical victories of Marxism-Leninism. Socialism was built for the first time in the history of mankind in the USSR. The revolutionary transfer of power to the hands of the working class has been accomplished in several countries of Europe and Asia; a new form of proletarian dictatorship — the peoples democracy — has arisen and grown; socialist construction is advancing successfully.

The XXth Congress of the CPSU has made an enormous contribution to the treasure-house of Marxism-Leninism. On the basis of the Congress decisions, a series of large-scale measures has been introduced in the USSR towards the political, economic and cultural development of the country and the strengthening of the Soviet state. The consequences of the personality cult have been liquidated and the Leninist principles of Party leadership and standards of Party life have been revived, which has yet further accelerated the tempo of Communist construction. The Leninist principle of democratic centralism has been further developed, the rights of the union republics and local organs in the state and economic structure have been expanded, industrial and construction management has been reformed, the paths of the further development of the kolkhoz system have been determined and the machine-tractor stations reorganized. The part played by the workers and social organizations in the building of the Communist society has grown immeasurably.

All these problems, of theoretical and practical significance to the task of building socialism, have been solved by the Party and the Soviet government by generalizing the experience of the broad masses of the workers and with their active participation. The vitality of Marxist-Leninist theory consists in that, engendered in the heat of the struggle of the working class, it evolves in indissoluble unity with the struggle itself.

Today our country has entered upon a new and most important period in its development — the period of the full-scale building of Communist society. It is stated in the theses of Comrade Khrushchev's report, Planning Figures for the Development of the National Economy of the USSR in 1959-65, to the XXI Congress of the CPSU, that: "We must make a new leap to a higher qualitative level of socialist economy on the road of its development to Communism, considerably increase the potential of the Soviet Union for further raising the level of prosperity of the people." The seven-year plan, it is stated in the theses, is "a shattering blow to bourgeois ideology, international reformism and revisionism."

Comrade Khrushchev's speech to the VIIth Congress of the BCP emphasizes the importance of unity in the ranks of the Communist and workers parties. Comrade Khrushchev discusses the propositions of the historical Declaration, which in principle regards modern revisionism as rightist opportunism and the chief danger point in the Communist and workers movement at the present stage. The Declaration also points out the danger of dogmatism and sectarianism.

"The Communists of all countries, "says Comrade Khrushchev, "have cordially approved the Declaration adopted at the Conference of brother parties from the socialist countries, have acknowledged it as a most important program document of the international Communist movement which profoundly analyzes the ways in which the development of modern society conforms to natural law and determines with exceptional clarity the tasks of the world Communist movement" (p. 13). Only one party (the Yugoslav Communist League) declared its dissent from the Declaration, by which it set itself in opposition to all the Marxist-Leninist parties of the world. All Communist and workers parties have unanimously and resolutely condemned the revisionist points of the Yugoslav Communist League program as running counter to Marxism-Leninism.

The following documents in the collection under review: "The Unity and Solidarity of the Marxist-Leninist Parties is the Guarantee of Further Victories for the World Socialist System," "Resolutions of the Second Session of the VIIIth All-Chinese Congress of the Chinese Communist Party on the Conference of Representatives of Communist and Workers Parties in Moscow," the articles by Chen Bo-Da "Yugoslav Revisionism — A Product of the Policies of Imperialism," by Wang Tsia-Siang "A Condemnation of the Modern Revisionist Theory of the State" and by Cheng Sui-Yuan "A Critique of Revisionist Views on the Party and the State," all extensively criticize the anti-Marxist, anti-Leninist tenets of the Yugoslav Communist League program. Chen Bo-Da remarks that the Communist parties of all countries have shown great solidarity and unity in their struggle with Yugoslav revisionism. Exposing the roots of the revisionism of the Yugoslav Communist League leadership, he writes: "Since the working class has already taken power into its own hands in several countries, the imperialists fe that it is no longer enough to bribe a certain number of working-class renegades in their own country. Continuing to pursue a policy of bribery in their own country, the imperialists, headed by the monopolists of the United States o America, are attempting by every possible means to seek out bourgeois-nationalist elements in certain socialist cou tries, to seek out unstable elements, to bribe them and ma tools of them for the purpose of undermining the dictatorsh of the proletariat and the socialist system, of undermining the international Communist movement and the solidarity of the socialist countries. This is why the Yugoslav ruling clique has caught the fancy of the American imperialists, who deal with it on a basis of bribery, for which huge sums of money are spent" (p. 313).

The draft program of the Yugoslav Communist League has provoked unanimous criticism by the Communist and workers parties of all countries, which has found expression in their press organs: Jen Min Jih Pao (China), Humanite (France), Unita (Italy), Tribuna Ludu (Poland), Tvorba (Czechoslovakia), Scinteia (Rumania), Tarsadalmi szemle (Hungary), Rabotnichesko Delo (Bulgaria), Zeri i Popullit (Albania), Daily Worker (England), Drapeau Rouge (Belgium), and others, as well as in statements by the Central Committees of Communist and workers parties. As h been unanimously noted in the press of all Communist parties, the Yugoslav Communist League program revises the basic principles of Marxism-Leninism. It incorrectly interprets the problem of the division of the world into two systems and two camps, ignores the experience gained in building socialism in the USSR and other socialist countri and belittles the contribution of the Communist Party and the socialist state in the building of socialism. It is no accident that bourgeois propaganda turns to its own purpose the revisionist theses contained in the program and speec of the Yugoslav Communist League leadership.

A favorite propaganda device of the bourgeoisie in its id logical struggle against the proletariat is the "theory" tha the economic teachings of Marxism are, it is alleged, "ob lete," that they are unable to explain the facts of today, th Marx's predictions regarding the trends of economic and political development of capitalist society have supposedl not come true. The collection includes a pamphlet by the General Secretary of the Australian Communist Party, L. Sharkey, entitled "Socialism in Australia. The Communis Viewpoint on 'Democratic Socialism,'" which is devoted t the exposure of this kind of "theory," now being dissemin by right-wing socialists, and by the British laborites in p ticular. Sharkey is a popular figure in the Australian labo movement. The translation of his work into Russian is to be welcomed (we may note that several theoretical works foreign Communists are printed in the Russian language the first time in this collection). Comrade Sharkey extensively and thoroughly criticizes the views of well-known right-wing British laborites — Prof. G. D. Cole, John Strachey and those who, in England and Australia, are grouped around them. He writes: "Their 'socialism' is built on the assertion that the Marxist analysis of the law of capitalist economic development is erroneous. Cole, Strachey and others frankly say so. They maintain that, thanks to measures recommended by the well-known bourgeois economist Lord Keynes, and also to measures take under Roosevelt's 'new deal,' capitalism now knows how avoid crises" (p. 88).

The ideas of the British right-wing laborites are share in Australia by Dr. Barton, a prominent figure in the labo ite movement. During a post-war period of relative "prosperity," a handful of revisionists inside the Australian CP also propagandized a right-wing opportunistic theory of an imaginary "new phase" of capitalism. "It was not long," Sharkey writes, "before the economic laws of capitalism dealt heavy blows to the illusions of the reformists and revisionists. Mass unemployment has once again come to Australia, the price of wool (our chief article of export) has fallen sharply, and the market for other raw materials and for farm produce has tightened seriously. The recession in the USA and Great Britain will also affect the Australian economy. Thus," concludes Sharkey, "the same fate awaits the Keynesians that has overtaken the reformists who, up to 1929, asserted that 'Ford has refuted Marx'" (p. 89).

In a clear and profound polemic against Cole, Sharkey proves that Marx not only did not err in his analysis of the basic laws and characteristics of capitalism, but diagnosed its future with exceptional insight. Sharkey makes use of factual material to show that the exploitative nature of capitalism has not changed in the era of imperialism. And the process of the absolute and relative impoverishment of the proletariat is now in motion. Adducing many facts, Sharkey convincingly shows the correctness of the Marxist-Leninist analysis of the basic problems of modern capitalism. He exposes the reformists and revisionists as the carriers of the ideology of the bourgeoisie in the Communist and workers movements. The author substantiates the view of the Australian Communists that the struggle against capitalism is going to go on and become more exacerbated. The reader will find Sharkey's pamphlet highly interesting.

The collection under review thoroughly examines the most important theoretical and political questions of modern capitalism, particularly the problem of the general crisis of capitalism. Leading figures in various Communist parties searchingly criticize, from the Marxist-Leninist standpoint, the views of reformists and revisionists on the nature of monopolistic capitalism, the role of the bourgeois state, the importance of the class struggle under modern conditions, paths of transition from capitalism to socialism and other current problems involved in the struggle for socialism.

An article by Harry Pollitt, chairman of the Executive Committee of the British Communist Party, titled "Marxism and the Labor Movement in Great Britain," and an article by John Holland, general secretary of the party, titled "Labor Party Policy Today," examine the significance and part played by the scientific ideas of Marx, Engels and Lenin in the history of the British labor movement and at its present stage. "If the British working class," Harry Pollitt writes, "has been unable up to now to take some sort of step forward towards socialism, this is by no means because it has been lacking in organization or boldness... What the British working class needs more than anything else today is a clear socialist world outlook, confidence, and this can only be given by Marxism. The task of the Marxists within the labor movement is to revive this faith, undermined by rightist leaders, faith in its own powers, in its own ability to fight and overcome the exploiters..." (p. 180). John Holland's article discusses the struggle of the British CP against reformist ideology and the policies of the Labor Party. Painstakingly analyzing the laborite ideology, the author draws the following conclusion: "The new program platform of the Labor Party consitutes, as a whole, an attempt to force the laborite movement formally and officially to support modern monopolistic capitalism" (p. 196).

In an article on "The Application to Modern Conditions of Marxist-Leninist Teachings on the State," Walther Ulbricht, first secretary of the Central Committee of the SED [Socialist Unity Party of Germany. Transl.], writes that "as a result of international events and of certain occurrences in the socialist camp, as a result of desperate attacks by the imperialists on the ideological front, certain ideological vacillations and weaknesses have also been discernible among us recently. In the field of political economy, this applies, for example, to the views of certain comrades at the Institute of Economics attached to the German Academy of Sciences, the Central State Bureau of Statistics and the Academy of Public Law" (p. 219). Ulbricht criticizes the "theory" of the withering away of the state advanced by Benari, Behrens and Bloch. These economists had belittled the contribution of the power of the workers and peasants and distorted the teachings of Lenin on the state. The author of the article convincingly shows that the source of such anti-Marxist views is revisionism. He also criticizes dogmatism in the same vein as expressed in the oversimplified practical application of the scientific tenets of Marxism-Leninism, in a weak connection between theory and practice.

The author emphasizes that, in the struggle with modern revisionism and dogmatism, it is of enormous importance to study and generalize the experience of the struggle waged by the German labor movement against revisionism, anarchism, syndicalism and sectarianism. The party organizations must make full use of the classic heritage of Marx and Engels, and also of the works of Karl Liebknecht and Rosa Luxemburg directed against the revisionists.

The article by R. Naumann, member of the Central Committee of the SED, titled "Against the Danger of the Emergence of Revisionist Views in the Area of Political Economy," exposes the anti-Marxist character of criticism levelled by certain economists, especially Behrens and Benari, against the basic principles on which the national economy of the GDR is being administered.

Behrens and Benari had essentially proposed in their works that centralized planning management of the national economy be abandoned and replaced by its regulation through categories of value. In their opinion, the national economy is regulated under socialism by the spontaneous operation of the law of value.

Criticizing these incorrect, anti-Marxist views, R. Naumann remarks: "Marxism-Leninism teaches, and the practice of socialist construction proves that neither the basic economic laws of Communism, nor the law of the systematic, proportioned development of the national economy, nor any other economic laws of socialism operate spontaneously, that they must be applied consciously. The law of value cannot be turned to account for the benefit of socialist construction without firm party and state leadership'" (p. 238).

The reports and speeches of the first secretary of the Central Committee of the PUWP [Polish United Workers Party. Transl.], Comrade W. Gomulka, "Main Problems of Party Policy" (from the report to the IXth Plenum of the Central Committee of the PUWP), "The Situation in the Party and the Country (from the report to the Xth Plenum of the CC of the PUWP) and "Our Party Will Always Cherish the Unity of the Countries of the Socialist Camp" (from a speech to a solemn conference in Gdansk) formulate the tasks of the party's struggle against revisionism, emphasize the need for unity in its ranks for the successful building of socialism in peoples Poland. "The strength of the party," Gomulka says, "lies in its ideological unity, in the confidence of its members and in their understanding of the correctness and necessity of applying general laws and principles in the struggle of the party to effect the transition of the people from capitalism to socialism" (p. 361). He gives a well-reasoned criticism of revisionists who revise the Leninist principles of socialist construction, the principles of democratic centralism. Gomulka gives a detailed and thorough description of the situation of the country in 1956 and of the chief problems of party policy. Much attention is given in his speeches to the necessity for unity among the countries of the socialist camp.

Searchingly analyzing the causes and nature of international revisionism, Gomulka shows that revisionism is no novelty in the labor movement, that it is as old as the labor movement itself. And, although revisionism does not die out, it never lasts long in the revolutionary labor movement. When the labor movement is on the march, it always jettisons all revisionist views and theories. Revisionism in its ranks would be fatal to it. Comrade Gomulka emphasizes that the creative development of Marxism and its enrichment by the historic experience of the class struggle of the proletariat have nothing in common with the revisionist misrepresentation of the bases of Marxist-Leninist teachings. "Marxism," says Gomulka, "as any other teaching, is subject to revision, since it develops together with life. Lenin revised, that is, he developed Marxism, but no one calls Lenin a revisionist. The XXth Congress of the CPSU revises certain principles of Marxism-Leninism; it suggests the possibility, and only the possibility — that is, it no longer regards it as a natural impossibility — that power can be wrested by the working class without bloodshed, by, for example, parliamentary means, and it also proposes the possibility, and only the possibility that war may be avoided. But no one says that the XXth Congress has betrayed revisionist tendencies, because it is not revisionism to introduce supplementary extensions to the teachings of Marxism that reflect the reality of life or changes in life. But it is revisionism to introduce new theoretical principles in Marxism if these principles do not accord with the laws that regulate social development ... Revisionism is the distortion of Marxism by introducing in this doctrine erroneous and spurious theses which do not correctly reflect social reality" (pp. 370-371).

Gomulka describes in detail the various revisionist groups which, under the spurious slogan of the "Polish October," attacked the Marxist-Leninist policies of the PUWP. It is noteworthy, Gomulka points out, that not one revisionist group, while criticizing the policies of the party, advanced any positive program at all for building socialism in Poland, "because these critics had another aim — to spread disappointment, to undermine the faith of the party in socialism, in the working class and in the people" (p. 384).

Comrade Gomulka emphasizes the necessity for brotherly cooperation with the USSR and the other socialist countries in the business of building socialism in peoples Poland. " ... We have always maintained and will always maintain firm solidarity and fraternal collaboration with our mighty neighbor — the Soviet Union, with all the countries of socialism on a basis of internationalism, friendship and equality. Establishing an order of social justice, the socialist order, we are very well aware of the usefulness for this purpose of fraternal collaboration with all other countries advancing towards the same goal" (p. 397). New, vast prospects are opening up to Poland at the present time in the building of socialism. The XIIth Plenum of the Central Committee of the PUWP, held in October, 1958, resolved to convoke the IIIrd Congress of the Polish United Workers Party in March, 1959. The congress will discuss directives relating to the development of the national economy between 1959 and 1965, problems of party policy, etc. The XIIth Plenum of the Central Committee indicated that the main efforts of the party must be aimed at the expansion of the economic base and the consolidation of the economic strength of the country.

At a workers' meeting in Warsaw in connection with the return from the Soviet Union of a delegation from the Polish Peoples Republic on November 12, 1958, Gomulka said: "Life daily confirms the correctness of Marxism and reveals t mendacity of the revisionist notions. The experience of t last year has fully confirmed the correctness of the appr al of revisionism and dogmatism given in the Declaration the 12 Communist and workers parties."

The collection under review also contains articles by t eminent publicist from the Bulgarian Peoples Republic, N kolai Iribadzhakov entitled "Modern Critics of Marxism," by the member of the national committee of the Brazilian Women's Federation, Fanny Tabac entitled "Against Certain Theses of Capitulation," by candidate-member of the politburo of the Central Committee of the Hungarian Soci ist Workers Party Geza Nemesz "The Revisionist Offensi as an Integral Part of the Ideological Groundwork for Co terrevolution in Hungary," by candidate-member of the p itburo and secretary of the CC of the SED Kurt Hager "T Intrinsic Nature and Consequences of Philosophic Revisi ism," by the chairman of the Central Control Commissio and member of the leadership of the Italian Communist p ty Mauro Scoccimarro "The Strengthening of the Party," general secretary of the Canadian Progressive Workers Party Tim Back "Revisionism is our Greatest Danger," Ho Chi-Minh entitled "The Ideological Struggle with Revisionism Must be Carried Through to the End," by the hon ary chairman of the Communist Party of the USA, Willia Foster, entitled "The Crisis of the Communist Party of t USA and How to Overcome It," by candidate-member of t politburo of the Central Committee of the French CP Rog Garodi on "The Struggle Against Revisionism," by mem of the CC of the French CP G. Coneau on "The Principle the October Revolution and Modern Revisionism," and an article by the eminent publicist of Czechoslovakia, Jindr Filipets entitled "On the Philosophical Problem of Strugg against Revisionism."

In these articles the reader will find searching and we reasoned analyses of the fundamental peculiarities of mo revisionism and reformism in the Communist and worke movement.

The huge successes of the countries of socialism frigh the ideologues of the capitalist system. In its struggle ag the world socialist camp headed by the Soviet Union, imp rialism makes use of every possible means, including mo revisionism.

V. I. Lenin wrote of revisionism: " ... What is now tur up in practice only in isolated, particular issues of the l movement, such as disagreements on tactics with revisi ists and the discord thus engendered — this will have to endured by the working class on an incomparably larger scale when the proletarian revolution exacerbates all co troversial issues and centers all disagreements on point of most direct significance for determining the conduct c the masses; it will make necessary the distinction of fri from foe in the heat of the struggle and the ejection of b allies if decisive blows are to be inflicted on the enemy. .

The correctness of the Marxist-Leninist doctrine is c firmed by the entire course of historical development. "Marxism-Leninism teaches," it is stated in the theses Comrade Khrushchev's report on "Planning Figures for Development of the National Economy of the USSR in 195 1965" to the XXI Congress of the CPSU, "that practice is the criterion of truth. The successes of Communist construction in the USSR are the best proof of the correctne of the course laid out for the Communist Party by Lenin At the same time, the decay and demoralization of the ca talist countries is an indisputable proof that the capitalis order is reactionary and doomed, and of the fruitlessne

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* V. I. Lenin, Works, Vol. 15, p. 25.

of the reformist and revisionist attempts to "improve" and dress up capitalism, to slur over its glaringly conspicuous sores and antagonistic contradictions (sic). The attempts of the revisionists to emasculate, to pervert Marxism, to sow discord in the fraternal family of the socialist countries, are doomed to failure."

The Communist and workers parties of all countries are confronted with great historical tasks. Their accomplishment requires monolithic solidarity in the socialist camp and the international Communist movement. The historical Declaration and Manifesto of Peace is the ideological basis of the unity of the world Communist movement. By carrying on an unflagging struggle against every manifestation of bourgeois ideology in the labor movement, the Marxist-Leninist parties will win one victory after another, drawing ever nearer to the inevitable triumph of Communism.

B. Orlov:

From the Economic History of Russian Industry

I. V. Maevskii, The Economics of Russian Industry During the First World War, Institute of Economics of the Academy of Sciences of the USSR, State Publishing House, 1957, 391 pp.

A number of special books, journal articles, and historical-economic monographs have been concerned with the economics of Russian industry during the first world war. However, these works have not fully met the tasks of studying the war economy of Russia during 1914-1917 and therefore the appearance of new scientific investigations devoted to this problem are to be welcomed. In I. V. Maevskii's monograph an attempt is made to analyze the regularities of development of Russian industry during the first world war, to show the quantitative and qualitative changes that occurred in it during this period. As a whole, the attempt is successful. The book under review gives a quite adequate and complete picture of the condition of Russian industry in 1914-1917.

I. V. Maevskii gives a brief characterization of the conditions of Russian industry on the eve of the first world war and, on the basis of a great deal of concrete material, he shows the weakness of the military-industrial potential of bourgeois-landlord Russia, its backwardness in this respect compared to other imperialist powers. There are interesting comparative data on the technical-economic preparedness of Germany and Russia for the war. It was the weakness of the military-economic potential of Russia that was the principal reason that Russian industry, despite the maximum exertion of its production-technical apparatus, was unable to meet the tasks of satisfying the needs of the front and rear.

In examining the character and results of the reorganization of Russian industry to meet the needs of the war the author shows that the production of the means of conducting the war lagged far behind the needs of the Russian army. This led unavoidably to strengthening the dependence of Czarist Russia on its imperialist allies. The author presents data indicating that the orientation of the Czarist government on the foreign market not only led to an extravagant use of the country's foreign exchange reserves but to a delay in the development of the productive forces in Russian industry because the diversion of great resources for payment of one-sided and expensive foreign military supplies and means of production sharply limited the possibility of constructing government plants and financing private capitalist industry.

The author analyzed the great quantitative and qualitative changes which occurred in industry under the influence of the war and the militarization of the national economy of Russia. The book notes that as a result of the conversion of basic productive capacity to the output of means of destruction and the sharp contraction of the civilian market, the structure of industrial production changed, new proportions between the individual branches of industry were formed, and production ties between industry and other branches of the economy were disturbed. In particular, the evolution of those branches of manufacturing industry which were most closely connected with the military market, such as machine building and the chemical industry, is well presented. The author reveals the structural changes in these branches and emphasizes that as a result of the hypertrophic growth of machine building characteristic of the war period the material-technical base of Russian industry not only was not strengthened but was undermined because this growth was the result of increasing the production of means of war while there was a sharp contraction in the output of many types of machine building production for peacetime consumption (equipment for industry, transportation, agriculture, etc.).

"A theoretical analysis of the concrete historical conditions of Russian industrial production," the author writes, "shows that expanded reproduction during the war does not cease but acquires new specific features inherent in a war economy. The characteristic feature of this reproduction is that two diametrically opposed bases are interwoven within it. On the one hand, on the basis of a redistribution of material elements of production (productive capacity, raw materials, fuel and auxiliary materials) an increase in the volume of output is promoted, while on the other hand there is the reverse process connected with the production of values, the material content of which (articles of military and material-technical army supply), is destined not for the development of productive forces but for destruction" (pp. 164-165). This important conclusion follows from the analysis of the great amount of concrete historical material presented in the book.

I. Maevskii shows the sharp disparity between war production and the fuel-metallurgical base of the country, and reveals the important changes which transpired as a result of the war in the production of metal and fuel. He emphasizes that the scarcity of metal and fuel was a principal factor determining the unavoidable degradation of industry and other branches of the Russian national economy in the process of the first world war. The book clearly shows the effect of the ruin of transportation on the supply of metal and fuel for the national economy; changes in the qualitative composition of the industrial labor force and the effect of various factors on the dynamics of labor productivity are examined in sufficient detail. The author concludes that "the decline in labor productivity was an important factor in the degradation of the productive forces of the country and in hastening the bankruptcy of the capitalist economy of Russia" (p. 343).

The work under review also analyzes the condition of the working class during the war period. On the basis of factual material the author shows that there was a sharp deterioration in the economic position of the industrial proletariat. Besides data on the decline in real wages, material is presented on the effect on the workers' economic position of such factors as the intensification of labor, a deterioration of sanitary working conditions, the actual abrogation of factory legislation.

It is known that the ruling classes of Russia took measures to secure the planned and uninterrupted operation of industry. However, material is presented in the book which indicates the futility of these efforts.

In analyzing the basic questions of his theme the author does not confine himself to Russia alone but presents relevant material on the economies of other warring powers. This makes it possible to compare the position of Russia with that of other imperialist powers and to conclude that the destructive consequences of the first world war on the economies of capitalism were not local but international in character. The author should be reproached in that he does not always show with sufficient depth the destructive effect of the first world war on West European industry.

I. Maevskii's book deserves a positive evaluation although it contains faults which must be examined. First of all this refers to the factual material which the author uses as evidence for some statements. It goes without saying that a great deal of material is collected and analyzed in the book. But the author approaches uncritically the material contained in some sources. We present some examples.

It is known that it is impossible to fully determine the degree of conversion of Russian industry to the production of military output because the necessary data are lacking. In the Central Statistical Administration handbook issued in 1925 it was indicated that 71% of all industrial production (1) went to meet the needs of the war. However, this figure is not altogether reliable. I. Maevskii, rejecting the calculations of the well known statistician N. Ia. Vorob'ev who substantially understated the relative weight of military consumption in Russian industrial production, thinks that about 80% of Russian industrial production went to meet the needs of the war (p. 93). Comrade Maevskii took this figure from "Studies of the Second Congress of Representatives of Military-Industrial Committees, February 26-29, 1916" (Part 2, p. 445) and uses it several times (pp. 93, 100, 107). However, in presenting this figure I. V. Maevskii does not support its reliability and, in particular, he does not inform the reader of the data used in deriving it.

Another example. On page 106 the author determines the interrelationships in the development of various branches of industry and changes in their relative weights in total industrial production from material in the industrial census of 1918 worked out by N. Ia. Vorob'ev(2). But these data are not exhaustive because the census included only somewhat more than one half of all enterprises. Unfortunately the author of the book under review does not even mention that the data he presents are to a certain extent of a provisional nature and are approximate. Further, I. Maevskii writes that about 80% of all workers were employed in one way or another in serving the needs of the war (p. 107). It seems to us that in this case the author "imputes" this figure in accord with the one he accepted earlier as the relative weight of military production in total industrial production. In any case the author does not inform us how this figure is derived. In determining the relative weight of workers employed in war industry one cannot use the data presented in the Central Statistical Administration handbook "Russia in the World War, 1914-1918," because these do not include all workers in Russian industry.

Therefore, the author sometimes comes to conclusions on the basis of statistical material which is not fully reliable and exhaustive. This naturally reduces the significance of some of the information presented in the book.

Another fault of the book under review is the incomplete treatment of certain questions. In the fifth chapter, "Concentration of Production and Growth of Capitalists' Profits," the enrichment of the bourgeoisie during the war years is illustrated principally by particular examples. It appears necessary to have presented, in the book, generalized indexes of the receipt of monopolistically high profits by capitalists during the militarization of industry. Besides this, the author did not attempt to uncover differences in the appropriation of profits between the monopolistic bour geoisie on the one hand, and middle and small businessme on the other. The rate and amount of profits received by these groups of the bourgeoisie, however, were not the sa

In the second chapter, "The Character and Results of th Conversion (Mobilization) of Industry to Meet the Needs o the War," correctly emphasizes the haphazard character of this conversion but does not reveal why Russia undertook the mobilization of its economic home front later tha other warring powers (not until the spring of 1915).

A characteristic feature of the Russian war economy in 1914-1917 was the fact that the owners of the largest ente prises in light industry (for example, Vtorov, Kuznetsov, Riabushinskii, Konovalov, and others) did not limit themselves to the conversion of productive capacity to serve th needs of the army but transferred their capital to the sphere of production of means of destruction. Thus, competition, the pursuit of profits led to the transfer of capita from light industry to heavy industry and the combination light and heavy goods production within single enterprises something that was almost unknown prior to the war. Thi process, however, was not analyzed by the author.

We cannot help but notice the incorrectness and inexact ness of some formulations and statements contained in th book under review. Thus, I. Maevskii points to the "signi ficant leap forward" experienced by Russia "in the sphere of industrial development during the last quarter of the 1 century and the first 10-13 years of the 20th century ..." (p. 48). This formulation does not take account of the sha changes in the rate of Russian industrial development at t beginning of the 20th century as compared with the end of the 19th. While in the period from 1870 to 1900 the output of Russian manufacturing industry increased by 4.5 times (with world production tripling), from 1900 to 1905 it increased by only 5% (with world production increasing by 26%).(3)

On p. 49 the author unjustifiably calls the Russian bour geois economist I. S. Bliukh the "theoretical armour-bea er" of rightist groups in Russia. However, his book "The Future War in its Technical, Economic, and Political As pects," which the author criticizes, was written in the sp of bourgeois pacifism which was by no means characteri of the rightist leadership of Russia.

I. V. Maevskii characterizes the Tsarist Ministers Sukhomlinov, Protopopov, and Shtiurmer as "henchmen" of the industrial bourgeoisie in the government (p. 75). How ever, these representatives of the military-feudal clique the most inveterate reactionaries surrounding the Tsar, no means can be considered as "henchmen" of the bourge sie in the Tsarist government.

Judging by what the author says on p. 74 it follows that union of the state apparatus and the monopolies was not o a mass nature. In essence this formulation ignores the f that after the February Revolution the monopolistic bour geoisie fully subordinated to itself the state apparatus an that the leaders of finance capital (such as Guchkov, Ter shchenko, Konovalov) entered the Provisional Government know that V. I. Lenin called the Provisional Government government of the bourgeoisie and the landlord-bourgeoi

I. Maevskii states that the bourgeoisie created militar industrial committees for the purpose of establishing its rule over the economic and political life of the country (p. 87). It is known, however, that the bourgeoisie ruled

Russia economically even before the start of the first world war.

Some statements of the author are oversimplified and too one-sided; he does not take into account the full complexity of the phenomena which he is describing in some cases. Thus, I. V. Maevskii writes that the Tsarist government did not promote the development of Russia's own national industry (p. 111). But how, in this case, are we to explain the policy of strengthening protectionism which was pursued during the 80's of the 19th century which not only secured the inflow of foreign investments but also the accumulation of national capital in a number of branches of industry?

On pp. 69-71 the author refers to the program worked out by the Main Artillery Administration for the construction of 37 government plants which was not fulfilled because of a sharp protest on the part of some leading authorities in charge of the Ministry of Finance and the Ministry of Trade and Industry. However, the book does not reveal why disagreements arose between various government echelons, what forces stood for the various positions, who opposed the construction of government plants, whose interests the opponents of this program served. The author confines himself to general remarks only: "Hindering and, where possible, even hampering the construction of economically and militarily important industrial projects, the representatives of the ruling power (and therefore the authors of the above mentioned program — B. O.) at the same time did not hesitate to babble (?) about the decisive significance of industry during the current war, particularly those branches which were busy serving the needs of war" (p. 70).

The book contains some inaccuracies of a factual nature. Thus, the author writes that Tsarist Russia "was unable to compete with either the old capitalist countries (England and France) or, particularly, with the new ones — USA, Germany, and Japan" (p. 8). Insofar as Japan is concerned this statement is incorrect: Japan lagged considerably behind Russia in the level of industrial development. In 1913 coal production in Japan was 21.3 million tons and in Russia (excluding Poland) it was 29.1 million tons, the production of cast iron in Japan (including Korea) reached 243 thousand tons while in Russia it was 4216 thousand tons, the production of rolled metal in Japan (excluding Korea) was 255 thousand tons and in Russia it was 3506 thousand tons. In 1914 Japan (including Korea, Taiwan, and Kwantung) produced 742 thousand tons of cement while Russia in 1913 produced 1520 thousand tons. In 1913 Japanese electric power stations had a capacity of 597 thousand kwt. while Russian electric power capacity was 1098 thousand kwt.(4) In 1914 the number of industrial workers in Japan was about one third the number in Russia. On p. 249 the author states that the combination of two competing monopolies in the Russian oil industry, Russian Oil and the Nobel Brothers firm, occurred before the merger of the largest combined machine building plants: Kolomensk, Sormovsk, Byksunsk, Beloretsk. In reality, as archive materials show, the facts were different. The agreement to combine the Kolomensk and Sormovsk firms was reached back in 1913 and then other corporations (for example, the firm of Beloretsk iron making plants in 1916) became attached to the "Kolomna-Sormovo" group.(5) Insofar as the agreement between the Russian Oil and Nobel Brothers firms is concerned, it was concluded in 1917.(6) On p. 260 the author incorrectly equates corporate and monopolized industry. Not all corporations were monopolies or were included in monopolistic combinations.

It was hardly necessary to examine in such detail, as the author did on pp. 17-27, the history of the inflow of foreign capital into the Russian national economy before the first world war. This material is not organically connected with the theme of this study and it would have been sufficient to confine oneself to material on the positions occupied by foreign capital in the Russian economy at the start of the first world war. There are also contradictory declarations in the book. Thus, on p. 17 the author writes that the end of the 19th and the start of the 20th centuries were characterized by a large inflow of foreign productive capital into Russia; on p. 27 he states that during this period foreign monopolies stopped "any substantial investment of new capital in Russian industry." On p. 116 there is a reference to a decline in the output of means of production during the war period. However, the table presented on the following page testifies to an increase in the output of "articles of peaceful consumption" (including means of production) of machine building plants in 1914-1917 as compared with 1913.

In the fifth chapter the author devotes several pages to the question of German capital and its role in weakening the military-economic potential of Russia during the war years. However, this question is incidental to the theme of "Concentration of Production and the Growth of Capitalists' Profits;" its inclusion in this chapter conflicts with the logic of the presentation and detracts from the analysis of the major questions to which this chapter is devoted.

The book abounds with numerous repetition. In particular, in the first chapter, "Russian Industry on the Eve of the First World War," the author presents facts which relate to the period of the war itself. Some of the author's statements are not supported by concrete material (see for example p. 58 where German steel production is discussed or p. 113 where it is stated that the Tsarist government "slighted" the idea of creating a heavy machine building industry in Russia). There are also other loose expressions. For example, I. Maevskii states that certain entrepreneurs were forced "to raise somewhat the value (?) of labor power" (p. 341).

Despite the deficiencies and gaps which have been noted, as a whole I. V. Maevskii's monograph will be useful to all students of the history of the national economy.

FOOTNOTES

(1) See "Russia in the World War, 1914-1918 (in figures)," Moscow, 1925, p. 7.
(2) See "Statistical Herald," Book XIV, 1923, pp. 124-125.
(3) See "Problems of History," 1955, No. 7, p. 20.
(4) See "The USSR and Capitalist Countries," a Statistical Handbook, State Planning Commission Publishing House, 1939, pp. 150, 158, 160, 183, 199.
(5) See "Problems of History," 1957, No. 2, pp. 28-30.
(6) See I. F. Gindin, Banks and Industry in Russia, Moscow-Leningrad, 1927, p. 157.

New Economic Literature

I. G. Bliumin, On Current Bourgeois Political Economy, Social Economic Publishing House, 1958, 160 pp.

This brochure briefly characterizes the principle tendencies of current bourgeois political economy and reveals its crisis. The author pays particular attention to exposing the theory of "regulated capitalism" (Keynesianism), neoliberalism, "peoples' capitalism," and analyzing the various forms of apologetics for monopoly, neo-Malthusianism, and Fascist economic theories.

A. V. Vorob'eva, Problems of Economizing on Raw Materials and Other Materials in Industry, Institute of Economics of the Academy of Sciences of the USSR, State Political Publishing House, 1958, 271 pp.

The book deals with questions of expanding the raw material base of industry, in particular by hastening the development of the production of artificial and synthetic materials, and examines the reserves and means of economizing on raw materials in several branches of heavy and light industry. The first chapter presents a characterization of the raw materials resources of industry and poses the problems of expanding them. The author also examines the question of utilizing raw materials in branches of industry which are heavy users of materials. The second chapter shows the role of technical progress in the rational utilization of raw materials and deals with the question of reducing losses and utilizing by-products. The third chapter examines problems of raising the quality and improving the preparation of raw materials in metallurgy, expanding assortment and introducing economical grades of rolled metal, and improving the primary processing of raw materials in light industry. The final chapter is devoted to basic questions of strengthening cost accounting in industry in connection with solving the problem of utilizing reserves of economized raw materials.

N. G. Grachev, Statistical Groupings in the Study of the Economics of Industry in the USSR, Institute of Economics of the Academy of Sciences of the USSR, State Statistical Publishing House, 1958, 212 pp.

This monograph examines general theoretical problems involved in the method of statistical groupings, its role in economic research as well as the principles and methods of applying groupings (particularly combined ones) in studying the structure of branches of industry, the analysis of plan fulfillment and determining intra-industry reserves (particularly reserves of productive capacity) at enterprises of the cotton, sugar, and brick industries of the USSR. With the aid of the grouping method the author investigates the effect of several factors on the level of production costs, the magnitude of production losses at enterprises of the above industries, and the rhythm of work at sugar refining plants is studied.

V. A. Zhamin, Social-Economic Transformations in Agriculture of the Chinese Peoples' Republic, Publishing House of the Institute of International Relations, 1958, 279 pp.

The monograph shows how the agrarian question was solved by the Communist Party of China at various stages of the revolution. The first chapter examines agrarian relations in China before the victory of the peoples'-democratic revolution. The second chapter deals with questions of elaborating the agrarian program of the Communist Party of China during the struggle for the victory of the peoples'-democratic revolution (during the years of the first and second revolutionary civil wars, the period of the war against the Japanese agressors, during the third revolutionary civil war). In the third and fourth chapters the author describes the general line of the Communist Party of China after the victory of the peoples' democratic revolution, in the transition period, and the carrying out of the land reform after the creation of the Chinese Peoples' Republic. In the fifth chapter of the book the question of the creation of the premises for the socialist transformation of agriculture in China is illuminated. The forms of production cooperation in the agriculture of the Chinese Peoples' Republic are presented in the sixth chapter. The sixth chapter shows the successes of the cooperative movement, the role of the Communist Party in agricultural cooperation in China, and the growth of the material and cultural level of life of the Chinese peasantry.

T. I. Zaslavskaia, The Principle of Material Self-Interest and the Payment of Labor in Collective Farms, Institute of Economics of the Academy of Sciences of the USSR, State Planning Publishing House, 1958, 163 pp.

This study consists of five chapters which examine the basic principles of payment for labor in collective farms, questions of standardization and wage classification, and various forms of payment for the labor of collective farmers (depending on output produced, guaranteed and supplementary pay).

The author pays particular attention to clarifying the question of the level of payments for labor days and its role in combining the private and social interests of collective farmers. The book is based on materials drawn from collective farms in Kalinin, Smolensk and Gorky provinces and is designed for leaders of collective farms, agronomists, zoo-technicians, economists, scientific workers and students.

History of Russian Economic Thought, Vol. I, The Epoch of Feudalism, Part II, 1800-1861, Institute of Economics o the Academy of Sciences of the USSR, Social-Economic Publishing House, 1958, 871 pp.

This book was prepared by a group of authors and issued under the editorship of corresponding-member of the Academy of Sciences of the USSR A. I. Pashkov. This work analyzes the development of economic thought in Russia during the early decades of the 19th century, analyzes the economic views of conservative and reactionary ideologist of the nobility, the economic platform of the liberal nobilit (M. N. Speranskii, N. S. Mordvinov), and the economic platform of the Russian merchants. Describing the revolutiona theory and program of the Decembrists, the authors prese the views of P. I. Pestel' as well as the economic ideas of Decembrists of moderate tendencies (N. Turgenev, N. Murav'ev, N. Bestuzhev).

Further, the book investigates Russian economic thought in the epoch of the crisis of serfdom and its liquidation (th economic views of the conservative and liberal nobility, bourgeois ideologists of the thirties and forties, the revolutionary-democratic ideas of V. G. Belinsky, the social-economic views of the Petrashevites, and the economic ideas of V. A. Miliutin). Showing the struggle of ideologica tendencies in the period of the reform of 1861, the authors describe the various tendencies in the economic thought of the nobility. Separate chapters are devoted to an analysis of the views of B. N. Chicherin, K. D. Kavelin, I. Ia. Gorlo Bourgeois economic thought of the period of the crisis and liquidation of serfdom is represented by the views of V. A. Kokorev, D. N. Strukov, I. V. Vernadsky, I. K. Babst. A considerable part of the book is devoted to an examination of the economic theories and programs of the revolutionar democrats (A. I. Gertsen, N. P. Ogarev, N. G. Chernyshevskii, N. A. Dobroliubov). Extensive bibliographical material is appended to the book.

L. M. Kantor, Production Costs in Socialist Industry, State Political Publishing House, 1958, 275 pp.

In this study the author's purpose is to present a many-sided exposition of questions of production costs in socialist industry and the related problems of price formation. The book examines the economic content of production costs in socialist industry, the formation of industrial production costs, the classification of production expenses, an the structure of industrial production costs in the USSR.

eparate chapters of the study are devoted to problems of alculating production costs, planning the reduction of pro-uction costs, determining production costs in multi-product roduction units. At the end of the study the author analyzes he interrelationships between production costs and the pric-s of industrial output.

. N. Kolosovskii, Principles of Economic Regionalization, tate Political Publishing House, 1958, 200 pp.

This collection contains several studies of N. N. Kolosov-kii which are the results of the further development and pplication of the basic principles of the GOELRO plan and tudies of the State Planning Commission on economic re-ionalization for the planning of individual production com-lexes.

a. A. Kronrod, The Social Product and its Structure Under ocialism, The Institute of Economics of the Academy of ciences of the USSR, State Political Publishing House, 958, 566 pp.

This book consists of 7 chapters. In the first chapter the ocial product is examined as an economic category of so-ialism. In the second chapter the structure of the national conomy and the social product are analyzed. The third hapter is concerned with the preferential development (a igher rate of growth) of production of the means of produc-ion. An analysis of the material structure of the total pro-uct of the socialist society is presented in the fourth chap-er. The three final chapters of the study illuminate the alue structure of the total social products and the compo-ents of this structure (the replacement fund and the accumu-ation and consumption funds).

. S. Livshits, The Location of Ferrous Metallurgy in the SSR, The Institute of Economics of the Academy of Sciences f the USSR, Publishing House of the Academy of Sciences of he USSR, 1958, 376 pp.

This book analyzes the basic features of the location of in-ustry in the USSR and the special characteristics of the ocation of ferrous metallurgy.

In examining the special characteristics of the location of errous metallurgy as compared to other branches of indus-ry the author deals with methodological questions of deter-ining economic effectiveness in the selection of regions nd points of location for enterprises in ferrous metallurgy. ata are presented in the book on the location of ferrous etallurgy in prerevolutionary Russia, changes which have ccurred in the location of this branch of industry during he years of Soviet rule, and problems in the further im-rovement of the geographical location of ferrous metallurgy the USSR are examined.

. A. Maslennikov, The Economic Structure of the Chinese eoples' Republic, The Far Eastern Institute of the Academy f Sciences of the USSR, Publishing House of the Academy of ciences of the USSR, 1958, 391 pp.

The first chapter of this monograph examines the charac-er and moving forces of the Chinese revolution, the special haracteristics of the transition period in the Chinese Peo-les' Republic, reveals the role of the peoples'-democratic tate and the Communist Party of China in the system of the emocratic dictatorship of the people.

In the second chapter of the study the author sheds light the changes occurring in Chinese industry as a result of he socialist industrialization of the country and also de-cribes the socialist transformation in agriculture, handi-raft industry, capitalist industry and trade.

The third and fourth chapters of the book are devoted to the economics of Chinese industry and agriculture. In the fifth chapter money and commodity circulation, the state budget, and transportation in the Chinese Peoples' Republic are examined. The book ends with a chapter in which a description of the rise in the material well-being of the workers of the Chinese Peoples' Republic is given.

The World Socialist Economic System, The Institute of Economics of the Academy of Sciences of the USSR, State Planning Publishing House, 1958, 559 pp.

This collection was prepared by a group of economists of the Soviet Union and the Peoples' Democracies of Europe and Asia. It contains articles by K. Ostrovitianov on "The Significance of the Victory of Socialism and the Building of Communism in the USSR for the Creation and Development of the World Socialist System," L. Gatovskii on "General Regularities and Peculiarities of Building Socialism in Different Countries," A. Kozik on "The Rise and Principal Features of the World Socialist Economic System," A. Alekseev and V. Kuvarin on "The Main Economic Task of the USSR," Hui Huan-Hiuan on "Peculiarities of Socialist Construction in the Chinese Peoples' Republic," B. Mints on "Socialist Industrialization — the Most Important Condition for the Building of Socialism in the Polish Peoples' Republic," G. Kol'meia on "The Role of Industry and Foreign Trade of the German Democratic Republic in the World Socialist Economic System," V. Kaigla on "The Place of Czechoslovakia in the Division of Labor and Economic Collaboration of Socialist Countries," K. Svobody and L. Shpirka on "Application of the Leninist Cooperative Plan in the Process of Socialist Reorganization of Agriculture in Czechoslovakia," I. Frish on "The Building of a Socialist Economy in the Hungarian Peoples' Republic," N. N. Konstantinesku on "The Transformation of Rumania From an Economically Backward to an Industrial Agrarian Country," T. Chernokoleva on "The Socialist Reconstruction of Agriculture in the Peoples' Republic of Bulgaria," Kh. Mara on "The Development of the National Economy of Albania," Li Men So on "The Building of Socialism in the Korean Peoples' Democratic Republic," N. Zhagvaral on "The Socialist Reconstruction of Agriculture in the Mongolian Peoples' Republic," Bui Kong Chynga on "Social-Economic Transformations in the Democratic Republic of Vietnam," A. Loshchakov on "Economic Collaboration of Socialist Countries at the Present Stage."

L. V. Opatskii, Location of the Food Industry of the USSR, Institute of Economics of the Academy of Sciences of the USSR, State Planning Publishing House, 1958, 354 pp.

This study consists of three divisions. The first division examines the economic premises for the formation of the capitalist food industry and the peculiarities of its development and location in Tsarist Russia. In the second division the special characteristics of the location of the food industry of the USSR and its role in socialist reproduction are clarified. The author describes the influence of individual factors — raw material, technical, transportation — on the location of the food industry. The third division shows the results of and the perspectives for the development of the food industry of the USSR and presents means of improving the geographic lication of this branch.

K. A. Pazhitnov, Essays on the History of the Textile Industry of Pre-revolutionary Russia. The Cotton, Flax-Hemp, and Silk Industries. Institute of Economics of the Academy of Sciences of the USSR, Publishing House of the Academy of Sciences of the USSR, 1958, 425 pp.

The author shows the process of the development of the cotton, flax-hemp, and silk industries of Russia under the feudal-serf structure, industrial capitalism, and imperialism. This study, together with the same author's book on the history of the development of the wool industry issued in 1955, provide a picture of the process of historical development of the textile industry of Russia as a whole.

A. I. Pashkov, The Economic Law of the Preferential Growth in the Production of Means of Production, The Economy Faculty of the Moscow State University Named M. V. Lomonosov, State Planning Publishing House, 1958, 232 pp.

In the first chapter the author examines the means of production, their composition and role in social production, the essence of the law of the preferential growth of means of production and its material basis. In the same chapter the social and class content of this law and its operation under capitalism are characterized. The second chapter of the study is devoted to an investigation of the content and role of the law of the preferential growth in the production of means of production under socialism. In the third and fourth chapters of the book the operation of this law in the USSR during the transition period from capitalism to socialism and under socialism are examined. The fifth chapter contains material showing the operation of the law of the preferential growth in the production of means of production in the peoples' democracies of Europe and Asia. In the concluding chapter the author presents data on the industrialization of underdeveloped capitalist countries of Asia and Africa.

F. Ia. Polianskii, The Primary Accumulation of Capital in Russia, Social-Economic Publishing House, 1958, 416 pp.

The process of the creation of capital and the working class in Russia is examined in this book. This study follows the author's monograph published in 1956 on "The Economic Structure of Manufacturing in Russia in the 18th Century."

Problems in the Development of Industry and Transportation in the Buriat ASSR, Institute of Economics of the Academy of Sciences of the USSR, Publishing House of the Academy of Sciences of the USSR, 1958, 307 pp.

This monograph was prepared by a group of authors. It shows the development of the metal processing, fuel, lumber, light, and food industries, electric power, building materials, and transportation in the Buriat ASSR. Special chapters are devoted to the labor resources and regionalizati
of the republic.

Ia. G. Feigin, The Location of Production Under Capitalis
and Socialism, Institute of Economics of the Academy of
Sciences of the USSR, Second Edition, Revised and Supple
mented, State Political Publishing House, 1958, 687 pp.

The first three chapters of this study are devoted to a
examination of problems of location of production under
capitalism, a criticism of current bourgeois theories of
cation of productive forces, and the peculiarities of locat
of production in Tsarist Russia. In the remaining seven c
ters the author clarifies the problems of location of soci
ist production, its regularities and principles, advantage
and economic effectiveness, paying special attention to a
analysis of the interconnections between technical progr
and the location of production, the influence of geographi
location of socialist production on the expansion of the ec
omy and culture of the union republics. The study poses
problems of further improvement in the location of produ
tion in the USSR and the effect of the international social
division of labor on the development and location of prod
tion in the socialist countries.

Economic Collaboration and Mutual Aid Between the Soviet Union and the European Peoples' Democracies, Institute of Economics of the Academy of Sciences of the
USSR, Publishing House of the Academy of Sciences of th
USSR, 1958, 232 pp.

This collective work examines the premises, principle
and characteristic features of the economic collaboratio
among socialist countries, the basic regularities and pe
culiarities of socialist industrialization in the peoples' d
mocracies, the forms of mutual aid among socialist stat
in the process of industrialization and the significance o
this mutual aid in the creation of a material-production
base for socialism in the European peoples' democracie
The authors pay particular attention to the question of a
plying the Leninist cooperative plan and utilizing the ex
perience of the Soviet Union in the socialist transforma
of agriculture in the European peoples' democracies.

The book analyzes the foreign trade connections of P
land, Czechoslovakia, the German Democratic Republic
Hungary, Rumania, Bulgaria, and Albania with other s
cialist countries. The authors examine the importance
economic collaboration of socialist states in increasing
the material well being and cultural level of the worker

SCIENTIFIC LIFE

V. Vasiliev:

Problems Posed by Life

(The results of a scientific conference on the economic sciences in the Siberian section of the Academy of Sciences of the USSR.)

The great economic future of Siberia and its very rich natural resources were particularly noted by V. I. Lenin in the first years of Soviet power. At the 8th All-Russian Congress of Soviets he spoke of the importance of mastering the altogether boundless mineral wealth of Siberia. This wealth is being utilized on a larger and larger scale with each year.

The perspectives for the future development of the national economy of Siberia are even more grandiose. Its earth contains practically inexhaustible supplies of raw materials for the chemical industry. More than 2/3 of all the hydroelectric resources of the USSR are concentrated in the deep Siberian rivers. Siberian forests occupy more than 7 million square kilometers which contain valuable types of wood. Millions of hectares of virgin and unused fertile land still await cultivation. And in only one respect does Siberia have a shortage — in people. The urban and rural population of Siberia and the Far East constitute little more than one tenth of the whole population of the USSR. Therefore, it is understandable that attention should be paid to the problem of increasing labor resources in the eastern regions and to other vital problems at the conference on the economic sciences in the Siberian section of the Academy of Sciences of the USSR in October 1958. The conference also defined the principle economic tendencies which will be expressed in the plan of research work of scholars in Siberia and the Far East during the next seven years. The conference, in which representatives of various branches of industry as well as scientific workers took part, approved these principle tendencies.

The shortage of labor resources makes it necessary to widely apply the newest technique, the automation of production processes, and to attain the very highest level of labor productivity. In connection with this the scientific work conducted under the leadership of corresponding member of the Academy of Sciences of the USSR G. A. Prudenskii on the problem "Reserves of Growth in Labor Productivity in the Heavy Industry of Siberia and the Far East," is of particular significance. In Soviet economic science the problem of reserves of growth in labor productivity has been insufficiently worked out. At the same time this problem is of particularly great importance for industry in the eastern regions because here the rate of growth in labor productivity must be considerably greater than the average for the USSR. The principle purpose of the investigation will be an all-sided study of the problems of a rational utilization of labor time, the elaboration of balances of expenditures of labor time and their use in the analysis and planning of industrial production. All of this will make it possible not only to provide a complete characterization of these reserves but also to indicate the means of practically utilizing them.

In 1959 in the recently created Institute of Economics and Organization of Industrial Production of the Siberian Section of the Academy of Sciences of the USSR a study will be conducted on the reserves of growth of labor productivity in machine building and the coal industry. The selection of these two branches of industry for primary study is not accidental. The fact is that in connection with the development of ferrous and non-ferrous metallurgy Siberia is expanding the scale of machine building. Even now the first class output of Siberian machine builders is well known not only in the USSR but far beyond its limits. Siberia is in a position to successfully fulfill new tasks in the further expansion of this branch of industry both by utilizing production reserves as well as through the construction and putting into operation of new enterprises. However, the level of labor productivity at existing plants is not high as yet. Therefore, a scientific analysis of reserves of growth in labor productivity in machine building is of great practical significance.

At the first stage of the investigation it is planned to elaborate a method of statistical groupings for the analysis of the utilization of labor time, to determine a method of sample observations for correcting statistical accounting data on the utilization of labor time, and to provide industry with general recommendations on methods of studying labor time.

The 20th Congress of the Communist Party of the Soviet Union posed the task of creating a third metallurgical base for the country in the east. In addition to the development of ferrous metallurgy in Western Siberia on the basis of existing plants, prerequisites have also been created for the construction of a powerful metallurgical plant in Irkutsk oblast. Iron ore supplies for this plant will be gotten from the very rich Angaro-Ilimsk iron ore basin and coke will be supplied by the Kuzbass. This circumstance predetermines the further growth of coal output in the Kuznetsk coal basin.

In Siberia there are great deposits of coal and lignite lying on the very surface which makes it possible to work these deposits in the most profitable, open-pit manner and to obtain coal at a low production cost. This creates unusually favorable perspectives for speeding up construction of thermal electric power stations in Siberia as the principal source of cheap energy in a short period and with limited capital expenditures.

Despite the low production cost of coal in both the open-pit and underground methods of extraction the problem of reducing labor requirements and the problem of reserves of growth in labor productivity in Siberia continue to be of first rate importance. This is reflected in the plan of work of the Institute of Economics and Organization of Industrial Production which includes the theme "Reserves for Reducing Labor Requirements in the Coal Industry." Research on this theme has as its task to provide a method of analyzing reserves of reducing labor requirements and concrete measures to reduce labor requirements in underground extraction in Kuzbass mines and in open-pit mines of the Kansk-Achinsk coal basin. In 1959 a study will be conducted of labor requirements in coal extraction and methods of determining them, a method of investigating reserves for reducing labor requirements will be worked out, an analysis will be conducted of reserves connected with improving the organization of labor, improving the system of exploitation, and increasing the level of mechanization and automation. At the same time a balance of expenditures of labor time in enterprises of the coal industry will be worked out.

In the process of coordinating scientific work in the Yakutsk branch of the Academy of Sciences of the USSR a theme is being worked out on the subject "Labor Resources and Labor Productivity in Southern Yakutsk." This study has as its purpose to determine the means of securing labor power for enterprises of the developing mining industry of the southern and northeastern regions of Yakutsk and recommending methods of increasing labor productivity in the gold and mica industries. Scientific personnel from colleges and specialists from economic organs are being involved in 1959 in studying labor resources in the economic regions of Siberia and the Far East. Parallel with the analysis of reserves for increasing labor productivity a sample study will be begun in 1959 on the budgeting of time among workers in order to determine the factors relating to non-working time and affecting labor productivity.

Another basic direction in the economic research of scholars in Siberia is defined by the general problem, "The Development and Rational Location of Productive Forces in Siberia and the Far East" (led by corresponding member of the Academy of Sciences of the USSR N. N. Nekrasov). In the studies of this problem the participants include the Council on Productive Forces of the Academy of Sciences of the USSR, the Institute of Economics of the Academy of Sciences of the USSR and scientific institutions of the Siberian section: the Council on Expeditionary Studies, the Institute of Economics and Organization of Industrial Production, the Eastern-Siberian, Yakutsk, and Far-Eastern branches of the Academy of Sciences of the USSR, and the Buriat and Sakhalin Complex Scientific-Research Institutes.

In the prospect of economic development particular significance attaches to the industrialization of Siberia and the Far East where great natural resources are concentrated and the conditions for their extensive industrial use exist. Here, in particular, there is everything necessary for the development of the chemical industry and above all for the production of synthetic materials. A powerful pipeline transporting Urals-Volga oil will make it possible, to a considerable extent, to process oil on the spot and by virtue of that to develop oil chemistry. Very favorable conditions exist for the development of coal chemistry. Unlimited reserves of natural compounds in the form of mineral salts of the acrid-salty waters of the Kulunka Lake and of rock salt of Eastern Siberia make possible the organization of large scale production of chlorine and its compounds as well as products of basic chemistry.

The prospects are no less grandiose in the sphere of developing timber-chemistry as well as chemical products on the basis of gasifying peat which will make it possible, in passing, to obtain acetic acid, ammonia, phenol, and paraffin on an industrial scale. All of this, in turn, will supply the necessary raw materials for the production of plastics and other synthetic materials.

The accelerated power development in Siberia will make it possible to extensively introduce electrical energy in all production processes and will create the conditions for a more rapid growth in energy-using products such as aluminum, for example, as well as other metals. At the same time an energy base will be created for the full electrification of railroad transportation and agriculture.

The economy of Siberia, despite the existing subdivision into separate economic administrative regions, represents to a considerable extent a single national economic complex. It is extremely important to provide for mutual production cooperation in the plans for the development of the individual republics, territories, and oblasts. Therefore, the conference summoned scholars of the Siberian section of the Academy of Sciences of the USSR together with economic councils and planning organizations to determine scientific basis for the development and rational location productive forces in Siberia and the Far East, interregio production ties, and forms of production cooperation. Th will ensure the optimum conditions for the further develo ment of industry and agriculture in Siberia and the Far East. In full conformity with this task a theme will be worked out on the subject "Production Ties and Ensuring Labor Resources for Ferrous Metallurgy in Western Sib in the Institute of Economics and Organization of Industr Production. The study must determine the production tie of ferrous metallurgy in Western Siberia with other bran of the economy of the economic region, available reserv of productive capacity, the utilization of raw material an fuel-power resources, as well as labor resources within the metallurgical complex depending on the improvemen of internal and external ties.

In accord with the projected plan the Eastern-Siberian branch of the Academy of Sciences of the USSR is setting itself the task of completing a study in the area of the location, specialization and complex development of the Irkutsk economic administrative region, as well as a study in the field of location and specialization of agricu ture in the southeastern part of Siberia. At the same tim a monograph is being completed which is devoted to an economic-geographic characterization of the Irkutsk and Chitinsk oblasts and model maps for the industrial and agricultural divisions have been prepared for an all-sid geographic atlas of the Irkutsk oblast.

In 1959 the Buriat Complex Scientific-Research Instit is completing a study on the economic-geographic chara terization of the Buriat ASSR as well as working out the basic means of developing the coal industry of Eastern Siberia. The Yakutsk branch of the Academy of Sciences of the USSR will be occupied on the preparation of a mo graph on "Western Yakutsk" which will describe natural resources and elaborate the perspectives for the develo ment of the productive forces of the northeastern region of the Yakutsk ASSR. The Far Eastern branch of the Aca of Sciences of the USSR, in its theme, is determining th economic effectiveness of transferring various types of power to the principle power regions of the southern pa of the Far East. Economists of the Sakhalin Complex Sc entific-Research Institute are investigating the structur of the fuel-power balance of Sakhalin and its rationaliza tion.

All of the indicated studies must be directed toward framing hypotheses concerning the development of the p ductive forces in the larger regions of Siberia and the Far East. They must be concerned with the suitable loc tion of new production bases, the correct structure in th development of production, establishing rational produc ties between separate economic administrative regions as well as between separate production bases. A compo part of the problem is, for the first time, to elaborate t question of labor resources and their utilization in indi vidual branches of production and in individual national economic complexes.

Hypotheses on the development of the productive forc of the larger economic regions of Siberia and the Far E will be examined at special conferences, in particular the conference on the development of the productive for of the Far East which is planned to be called in 1960.

The complex of economic studies on Siberia also incl the elaboration of mathematical methods of analysis fo the solution of national economic problems and planning economic tasks. This is being done by a laboratory on application of statistical and mathematical methods in economics under the leadership of Academician V. S. Nemchinov and corresponding member of the Academy of Sciences of the USSR L. V. Kantorovich. On certain aspects of this problem work will be carried out jointly with the Scientific-Research Economic Institute of the State Planning Commission of the USSR and other scientific-research organizations.

The application of mathematical methods in national economic planning as well as in the solution of planning-economic problems at the level of the economic region, branch, and enterprise is a highly promising matter. Such methods are destined to play a large role in the improvement of planning and economic analysis. In the plan of scientific-research work on this problem two themes are included which are connected with the most important tendencies in the application of mathematics in planning-economic calculations. The first of these is "The Balance of Expenditures and Output in Production." This includes an elaboration of a method of analyzing the balance of the national economy, the transformation balances in the scheme of expanded reproduction of Marx. In the future it is planned to utilize the method of "balance of expenditures and output" in studying inter-industry and interregional ties among the economic councils of Siberia and the Far East.

The other theme, "Methods of Optimum Planning of Production Factors and Resources Among the Tasks of the Economics of Production," is connected with elaborating mathematical methods, in particular the method of two-sided estimates. In the theoretical plan the question of using such methods in estimating the yield of capital investment will be worked out. Jointly with the engineering-economic institute a method of organizing production and planning in forge and foundry shops will be prepared.

The solution of the tasks posed at the conference requires a radical change in the methods of research used up to this time. Successful results will depend to a considerable extent on the nature of the collaboration of scientific personnel with practical workers. The leaders of the economic councils of the Novosibirsk, Kemerovsk, and Krasnoyarsk economic administrative regions have already selected a number of specialists from industrial enterprises to work jointly with scholars-economists of Siberia. The Institute of Economics and Organization of Industrial Production and the economic councils are jointly creating a network of complex basic laboratories for the leading branches of industry. Such an organization of scientific work ensures a constant tie between the Institute and the principle economic administrative regions of Siberia and the Far East. This is also a reliable guarantee that the research work will not be isolated from vital questions of developing industrial production.

A special laboratory equipped with new instruments is being created in the Institute for measuring labor time. The existence of such a laboratory will make it possible not only to conduct extensive experimental work in the all-sided study of questions of labor productivity at enterprises of various branches of industry, but also to accumulate valuable materials for theoretical generalizations to follow. Besides this, the Institute of Economics and Organization of Industrial Production and the Novosibirsk economic council have set up a special complex brigade of scientific personnel and engineering-production personnel which must study the possibility of a more rational utilization of labor time at machine building enterprises of Novosibirsk.

The joint work of scholars and production personnel will make it possible to reveal fully the available reserves at enterprises. This will also be promoted by the photographing of labor time carried out by the workers themselves at many enterprises of the city at the initiative of economic and trade union organizations. This form of participation by workers in the struggle against losses of working time is of great positive significance.

The decisions of the conference emphasized the need to actively involve skilled scientific cadres from Siberian colleges and higher technical schools in working out basic economic problems of Siberia and the Far East.

In Siberia now a process of strengthening economic science is taking place. In this process an active role belongs to the scholars-economists of Moscow and Leningrad whose obligations include direct participation in working out the economic problems of Siberia and the Far East and proving concrete help in supplying skilled scientific cadres to economic organizations in Siberia. The movement of leading scholars from Moscow and Leningrad to Siberia where honorable, creative labor in the name of the further flourishing of our Soviet Homeland awaits them is undoubtedly a most patriotic and effective expression of such help.

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